



# Federal Register

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**Friday,  
December 1, 2000**

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## **Part II**

## **Environmental Protection Agency**

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**40 CFR Part 60**

**Standards of Performance for New  
Stationary Sources and Emission  
Guidelines for Existing Sources:  
Commercial and Industrial Solid Waste  
Incineration Units; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 60****[AD-FRL-6905-1]****RIN 2060-AF91****Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final standards and guidelines.

**SUMMARY:** We are promulgating standards and guidelines for new and existing commercial and industrial solid waste incineration (CISWI) units. These standards and guidelines fulfill the requirements of sections 111 and 129 of the Clean Air Act (CAA), which require us to promulgate standards and

guidelines for CISWI units. The final standards and guidelines will protect public health by reducing exposure to air pollution, including several hazardous air pollutants (HAP) that can cause toxic effects such as eye, nose, throat, and skin irritation; reproductive effects; and cancer. These standards and guidelines apply only to CISWI units burning nonhazardous wastes.

**EFFECTIVE DATE:** January 30, 2001.

**ADDRESSES:** *Docket.* Docket No. A-94-63 contains the supporting information used in developing the final standards and guidelines and is available for public inspection and copying between 8 a.m. and 5:30 p.m., Monday through Friday, at the Air and Radiation Docket and Information Center, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, telephone (202) 260-7548, fax (202) 260-4000. The docket is available at the above address in Room M-1500, Waterside Mall (ground floor, central

mall). A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Fred Porter, Combustion Group, Emission Standards Division (MD-13), U.S. EPA, Research Triangle Park, North Carolina 27711, (919) 541-5251, e-mail: [porter.fred@epa.gov](mailto:porter.fred@epa.gov).

**SUPPLEMENTARY INFORMATION:**

*Background Information.* A list of combustion related rules is available on the Combustion Group website on the EPA Technology Transfer Network website (TTN Web) at <http://www.epa.gov/ttn/uatw/combust/list.html>. You may obtain **Federal Register** notices, supporting information, and docket indices for these combustion related rules.

*Regulated Entities.* These standards and guidelines affect the following North American Industrial Classification System (NAICS) and Standard Industrial Classification (SIC) codes:

Category	NAICS Code	SIC Code	Examples of potentially regulated entities
Any industry using a solid waste incinerator as defined in the regulations.	325 .....	28 .....	Manufacturers of chemicals and allied products.
	325 .....	34 .....	Manufacturers of electronic equipment.
	421 .....	36 .....	Manufacturers of wholesale trade, durable goods.
	321, 337 .....	24, 25 .....	Manufacturers of lumber and wood furniture.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists examples of the types of entities that could be affected by this action. Other types of entities not listed in this table could also be affected. To determine whether your facility, company, business organization, etc., is regulated by this action, you should carefully examine the applicability criteria in 40 CFR 60.2010 of subpart CCCC and 40 CFR 60.2505 of subpart DDDD.

*Judicial Review.* We proposed this rule for CISWI units in the **Federal Register** on November 30, 1999 (64 FR 67092). This action adopting a rule for CISWI units constitutes final administrative action on that proposal. Under section 307(b)(1) of the CAA, judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by January 30, 2001. Under section 307(d)(7)(B) of the CAA, only an objection to this rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's

final action may not be challenged separately in any civil or criminal proceeding brought by the EPA to enforce these requirements.

*Organization of this Document.* The following outline is provided to aid in locating information in this preamble. With the exception of section V, which covers various administrative requirements, each section heading of the preamble is presented as a question, and the text in the section answers the question.

**I. Background Information**

A. What information is covered in this preamble?

B. Where in the Code of Federal Regulations will these standards and guidelines be codified?

C. What is the regulatory development background for these standards and guidelines?

D. What is the statutory authority for these standards and guidelines?

E. What are new source performance standards?

F. What are emission guidelines?

G. How are the emission guidelines implemented?

**II. Summary of the NSPS and EG**

A. Do the standards and guidelines apply to me?

B. What emission limitations must I meet?

C. What operating limits must I meet?  
D. What are the other requirements?  
E. What are the requirements for air curtain incinerators?

**III. Significant Issues and Changes**

A. Are very small municipal waste combustion units covered?

B. Are cyclonic barrel burners covered?  
C. Has the definition of a CISWI unit or solid waste changed?

D. Which elements of the definition of solid waste have been retained and clarified?

E. Were significant issues raised regarding EPA's approach to setting the proposed standards and guidelines, and has EPA made any changes?

**IV. Impacts of the Final NSPS and EG**

A. What are the air impacts for new units?  
B. What are the air impacts for existing units?

**V. Administrative Requirements**

A. Executive Order 12866: Regulatory Planning and Review

B. Executive Order 13132: Federalism

C. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments

D. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

E. Unfunded Mandates Reform Act

F. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory

Enforcement Fairness Act of 1996 (SBREFA),  
5 U.S.C. 601 *et seq.*  
G. Paperwork Reduction Act  
H. National Technology Transfer and  
Advancement Act  
I. Congressional Review Act

### Abbreviations and Acronyms Used in This Document

BDT Best demonstrated technology  
Btu British thermal units  
CAA Clean Air Act  
CFR Code of Federal Regulations  
CISWI Commercial and industrial solid  
waste incineration  
EG Emission guidelines  
EPA Environmental Protection Agency  
FACA Federal Advisory Committee Act  
FR **Federal Register**  
HMIWI Hospital/medical/infectious  
waste incineration  
HWI Hazardous waste incinerator  
ICCR Industrial Combustion Coordinated  
Rulemaking  
ICR Information Collection Request  
kg/hr Kilograms per hour  
lbs/hr Pounds per hour  
MACT Maximum achievable control  
technology  
mg/dscm Milligrams per dry standard  
cubic meter

Mg/yr Megagrams per year  
MWC Municipal waste combustion  
NAICS North American Industrial  
Classification System  
ng/dscm Nanograms per dry standard  
cubic meter  
NSPS New source performance standards  
NTTAA National Technology Transfer  
and Advancement Act  
OMB Office of Management and Budget  
ppm Parts per million  
RFA Regulatory Flexibility Act  
SBA Small Business Administration  
SBREFA Small Business Regulatory  
Enforcement Fairness Act  
SIC Standard Industrial Classification  
SWDA Solid Waste Disposal Act  
TEQ Toxic equivalency  
TTN Web Technology Transfer Network  
Website  
UMRA Unfunded Mandates Reform Act  
U.S.C. United States Code

### I. Background Information

#### A. What Information is Covered in This Preamble?

We summarize the important features of the standards and guidelines that apply to CISWI units in this preamble. The preamble also outlines the

significant issues and changes in response to public comments, the environmental impacts of these standards and guidelines, and the administrative requirements relative to this action.

#### B. Where in the Code of Federal Regulations Will These Standards and Guidelines be Codified?

The Code of Federal Regulations (CFR) is a codification of the general and permanent rules published in the **Federal Register** by the Executive departments and agencies of the Federal Government. The code is divided into 50 titles that represent broad areas subject to Federal regulation. The final standards and guidelines for CISWI units will be published in Title 40, Protection of the Environment. Part 60 of title 40 includes standards of performance for new stationary sources and emission guidelines and compliance times for existing sources. The table below lists the subparts in which the standards and guidelines will be codified.

Title of the regulation	Subpart in title 40, part 60
Standards of Performance for New Stationary Sources: Commercial and Industrial Solid Waste Incineration Units .....	Subpart CCCC.
Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units .....	Subpart DDDD.

#### C. What is the Regulatory Development Background for These Standards and Guidelines?

Section 129 of the CAA requires us to develop new source performance standards (NSPS) and emission guidelines (EG) for "solid waste incineration units combusting commercial or industrial waste." We refer to these units as "commercial and industrial solid waste incineration" (CISWI) units. On December 28, 1994 (59 FR 66850), the EPA published an advance notice of proposed rulemaking in the **Federal Register**. That notice requested information and data concerning the operation, location, emissions, and emission controls for CISWI units.

In September 1996, we chartered the Industrial Combustion Coordinated Rulemaking (ICCR) advisory committee under the Federal Advisory Committee Act (FACA). The committee's objective was to develop recommendations for regulations for several combustion source categories under sections 112 and 129 of the CAA. The ICCR advisory committee, known as the Coordinating Committee, formed Source Work Groups for the various combustor types covered under the ICCR. One work group, the

Incinerator Work Group, was formed to research issues related to CISWI units. The Incinerator Work Group submitted recommendations, information, and data analysis results to the Coordinating Committee, which in turn considered them and submitted recommendations and information to us. We have reviewed and considered the Committee's recommendations in developing these regulations for CISWI units. The Committee's 2-year charter expired in September 1998.

Pursuant to a February 1995 consent decree (as modified in July 1997), the Administrator was required to sign a notice of proposed rulemaking for CISWI units by November 15, 1999 for publication in the **Federal Register**. The consent decree also requires the Administrator to sign a notice of final rulemaking for CISWI units by November 15, 2000 for publication in the **Federal Register**.

The proposed rule satisfies the first requirement in the consent decree, and this final rule satisfies the second requirement.

#### D. What is the Statutory Authority for These Standards and Guidelines?

Section 129 of the CAA requires us to develop and adopt NSPS and EG for

CISWI units pursuant to section 111 of the CAA. Section 111(b) requires us to establish NSPS for new sources, and section 111(d) requires us to establish EG for existing sources. Under section 129, the NSPS and EG adopted for CISWI units must reflect maximum achievable control technology (MACT). This term "MACT" is defined in section 129 of the CAA as the maximum degree of reduction in emissions of air pollutants that the Administrator determines is achievable, taking into consideration the cost of achieving the reductions and any nonair quality health and environmental impacts and energy requirements.

#### E. What are New Source Performance Standards?

The NSPS apply to new stationary sources, that is, sources whose construction begins after the NSPS is proposed or sources that are reconstructed or modified on or after a specified date. The following are the key elements in an NSPS.

1. *Source category* means the industry or type of process that is regulated. The source category in today's final standards is CISWI units.

2. *Affected facility* means the equipment subject to the NSPS. The

affected facility in today's final standards is each individual CISWI unit.

3. *Pollutants* means the particular air pollutants emitted by the affected facility that the standards regulate. Section 129 requires us to regulate nine pollutants: cadmium, carbon monoxide, dioxins/furans, fine and total particulate matter, hydrogen chloride, lead, mercury, oxides of nitrogen, and sulfur dioxide. Under section 129, opacity standards may also be required as appropriate.

4. *Maximum achievable control technology* means the technology on which the emission standards will be based. Section 129(a)(2) specifies that standards be based on "the maximum degree of reduction in emissions . . . that the Administrator, taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts and energy requirements, determines is achievable \* \* \*." (Note that the basis of these solid waste incineration standards is different from that of the typical NSPS under section 111. The basis of the typical NSPS is "best demonstrated technology." These solid waste incineration NSPS are based on MACT and, in this sense, therefore, are similar to national emission standards for hazardous air pollutants (NESHAP) for new sources under section 112.)

5. *Format* means the form in which the standards are expressed; for example, as pollutant concentration emission limitations, as a percent reduction in emissions, or as equipment or work practice requirements.

6. *Standards* generally means emission limitations based on the level of reduction that the MACT can achieve. Under certain circumstances, it may not be possible to develop emission limitations if the level of performance cannot be identified. Only in unusual cases do standards require that a specific technology be used. In general, the source owner or operator may select any method for complying with the emission limitations.

7. *Other considerations*. In addition to emission limitations, NSPS usually include monitoring requirements, performance test methods and compliance procedures, and reporting

and recordkeeping requirements. Section 129 also directs EPA to establish siting requirements for new incineration units and operator certification and training requirements for all units.

#### *F. What Are Emission Guidelines?*

The EG are similar to the NSPS, except that they apply to existing sources, that is, sources whose construction begins on or before the date the NSPS is proposed, or sources that are reconstructed or modified before a specified date. Unlike NSPS, the EG are not enforceable until EPA approves a State plan or adopts a Federal plan for implementing and enforcing them, and the State or Federal plan becomes effective. (Note that the basis of these solid waste incineration guidelines is different from that of the typical EG under section 111. The basis of the typical EG is "best demonstrated technology." These solid waste incineration EG are based on MACT and, in this sense, therefore, are similar to national emission standards for hazardous air pollutants (NESHAP) for existing sources under section 112.)

#### *G. How Are the Emission Guidelines Implemented?*

When EG are promulgated under sections 111(d) and 129(b), the CAA requires States to adopt and submit to EPA for approval a State plan implementing the EG within 1 year after the promulgation of the EG (section 129(b)(2)). Section 129 requires that the State plan must be at least as protective as the EG and must provide for compliance by affected facilities no later than 3 years after the Administrator approves the State plan, but no later than 5 years after EPA promulgates the EG. Sections 111(d) and 129(b) also require EPA to develop, implement, and enforce a Federal plan if a State fails to submit a satisfactory State plan.

## **II. Summary of the NSPS and EG**

This preamble discusses the major requirements of the NSPS and EG as they apply to you, the owner or operator of a new or existing CISWI unit.

#### *A. Do the Standards and Guidelines Apply to Me?*

The standards and guidelines apply to you if you own or operate a combustion

device that combusts commercial and industrial waste (as defined in § 60.2265 of the NSPS and § 60.2875 of the EG). Commercial and industrial waste is solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

Fifteen types of combustion units, which are listed in § 60.2020 of the NSPS and § 60.2555 of the EG, are exempt from these standards and guidelines.

If you began the construction of your CISWI unit on or before November 30, 1999, it is considered an existing CISWI unit and is subject to the EG. If you began the construction of your CISWI unit after November 30, 1999, it is considered a new CISWI unit and is subject to the NSPS.

If you began reconstruction or modification of your CISWI unit prior to June 1, 2001, it is considered an existing CISWI unit and is subject to the EG. Likewise, if you began reconstruction or modification of your CISWI unit on or after June 1, 2001, it is considered a new CISWI unit and is subject to the NSPS.

#### *B. What Emission Limitations Must I Meet?*

As the owner or operator of a new or existing CISWI unit, you are required to meet the emission limitations specified in Table 1 of this preamble. You must conduct a performance test to show compliance within 60 days after a new CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the unit's initial startup.

As the owner or operator of an existing CISWI unit, you are required to meet the emission limitations specified in Table 1 within 3 years after the Administrator approves the State plan or promulgates a Federal plan. Each existing CISWI unit must be in compliance within 5 years of promulgation of the EG.

TABLE 1.—EMISSION LIMITATIONS FOR NEW AND EXISTING CISWI UNITS

For these pollutants	You must meet these emission limitations <sup>a</sup>	And determine compliance using these methods <sup>b</sup>
Cadmium .....	0.004 mg/dscm .....	EPA Method 29.
Carbon Monoxide .....	157 ppm by dry volume .....	EPA Methods 10, 10A, or 10B.
Dioxins/Furans (TEQ basis) .....	0.41 ng/dscm .....	EPA Method 23.
Hydrogen Chloride .....	62 ppm by dry volume .....	EPA Method 26A.

TABLE 1.—EMISSION LIMITATIONS FOR NEW AND EXISTING CISWI UNITS—Continued

For these pollutants	You must meet these emission limitations <sup>a</sup>	And determine compliance using these methods <sup>b</sup>
Lead .....	0.04 mg/dscm .....	EPA Method 29.
Mercury .....	0.47 mg/dscm .....	EPA Method 29.
Opacity .....	10 percent .....	EPA Method 9.
Oxides of Nitrogen .....	388 ppm by dry volume .....	EPA Methods 7, 7A, 7C, 7D, or 7E.
Particulate Matter .....	70 mg/dscm .....	EPA Method 5 or 29.
Sulfur Dioxide .....	20 ppm by dry volume .....	EPA Method 6 or 6c.

<sup>a</sup> All emission limitations (except opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

<sup>b</sup> These methods are in 40 CFR part 60, appendix A.

### C. What Operating Limits Must I Meet?

If you are using a wet scrubber to comply with the emission limitations, you must establish the maximum and minimum site-specific operating limits indicated in Table 2 of this preamble. You must then operate the CISWI unit and wet scrubber so that the operating parameters do not deviate from the established operating limits.

TABLE 2.—OPERATING LIMITS FOR NEW AND EXISTING CISWI UNITS USING WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitor continuously using these recording times
Charge rate .....	Maximum charge rate .....	Every hour.
Pressure drop across the wet scrubber, or amperage to the wet scrubber.	Minimum pressure drop or amperage .....	Every 15 minutes.
Scrubber liquor flow rate .....	Minimum flow rate .....	Do.
Scrubber liquor pH .....	Minimum pH .....	Do.

**Note:** Compliance is determined on a 3-hour rolling average basis, except charge rate for batch incinerators, which is determined on a daily basis.

If you are using an air pollution control device other than a wet scrubber to comply with the emission limitations, you must petition the Administrator for other site-specific operating limits to be established during the initial performance test and continuously monitored thereafter. The required components of the petition are described in § 60.2115 of the NSPS and § 60.2680 of the EG.

If you are using a fabric filter to comply with the emission limitations, in addition to other operating limits as approved by the Administrator, you must operate the fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.

### D. What are the other requirements?

As the owner or operator of a new or existing CISWI unit, you are required to meet the following additional requirements.

#### Siting Analysis (new units only):

- Submit a report that evaluates site-specific air pollution control alternatives that minimize potential risks to public health or the environment, considering costs, energy impacts, nonair environmental impacts,

or any other factors related to the practicability of the alternatives.

#### Waste Management Plan:

- Submit a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream to reduce or eliminate toxic emissions from incinerated waste.

#### Operator Training and Qualification Requirements:

- Qualify operators or their supervisors (at least one per facility) by ensuring that they complete an operator training course and annual review or refresher course.

#### Testing Requirements:

- Conduct initial performance tests for cadmium, carbon monoxide, dioxins/furans, hydrogen chloride, lead, mercury, nitrogen oxides, opacity, particulate matter, and sulfur dioxide and establish operating limits (i.e., maximum or minimum values for operating parameters).

- Conduct annual performance tests for particulate matter and hydrogen chloride emissions and opacity. (An owner or operator may conduct less frequent testing if the facility demonstrates that it is in compliance with the emission limitations for 3 consecutive years.)

#### Monitoring Requirements:

- If using a wet scrubber to comply with the emission limitations, continuously monitor the following operating parameters: charge rate, pressure drop across the wet scrubber (or amperage), and scrubber liquid flow rate and pH.

- If something other than a wet scrubber is used to comply with the emission limitations, monitor other operating parameters, as approved by the Administrator.

- If using a fabric filter to comply with the emission limitations, in addition to monitoring other operating parameters as approved by the Administrator, you must install and operate a bag leak detection system with an alarm.

#### Recordkeeping and Reporting Requirements:

- Maintain for 5 years records of the initial performance tests and all subsequent performance tests, operating parameters, any maintenance, the siting analysis (for new units only), and operator training and qualification.

- Submit the results of the initial performance tests and all subsequent performance tests and values for the operating parameters.

### *E. What Are the Requirements for Air Curtain Incinerators?*

The NSPS and EG establish opacity limitations for air curtain CISWI units burning:

- 100 percent wood wastes,
- 100 percent clean lumber, or
- 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

The opacity limitation is 10 percent, except 35 percent opacity is allowed during startup periods that are within the first 30 minutes of operation.

### **III. Significant Issues and Changes**

A total of 95 comments letters were received during the public comment period for the proposed CISWI rule, which ended on January 31, 2000. Among the comments received, the most significant issues addressed applicability, the definition of solid waste, and the MACT floor approach and emission limitations. The issues are addressed below, and other issues raised in the comments are addressed in a comment and response document contained in the docket.

#### *A. Are very small municipal waste combustion units covered?*

Commenters questioned whether very small municipal waste combustion (MWC) units (*i.e.*, units that combust less than 35 tons (31.8 megagrams (Mg)) of municipal solid waste per day) are covered by the proposed NSPS and EG. We did not intend to cover very small MWC units, and the final NSPS and EG have been clarified to ensure they are not covered.

The intent of the NSPS and EG for CISWI units is to cover incinerators burning commercial and industrial solid waste, not combustors burning municipal solid waste.

#### *B. Are cyclonic barrel burners covered?*

Several commenters questioned whether cyclonic barrel burners are covered by the proposed NSPS and EG. We did not intend to cover cyclonic barrel burners, and the final NSPS and EG have been clarified to ensure they are not covered.

A cyclonic barrel burner is a portable device for burning materials that can be attached to a 55 gallon, open-head drum. The device consists of a lid that fits onto the drum and is connected to a blower that feeds combustion air to the drum in a cyclonic or swirling manner to enhance the combustion of the material. We were not aware of the small combustion devices when developing the proposed regulations, and, as a result, had no information on the devices. Information on cyclonic barrel burners is currently being

gathered, and the devices will be evaluated separately from the CISWI category.

#### *C. Has the Definition of a CISWI Unit or Solid Waste Changed?*

Section 129(g)(1) and (6) create a specialized definition of "solid waste incineration unit" that depends in part on the definition of "solid waste" contained in section 1004(27) of the Resource Conservation and Recovery Act (RCRA). The overall intent of the CAA provisions is that section 129 rules are to apply to devices conventionally regarded as incinerators, that is, devices burning wastes in order to destroy the wastes. For purposes of promulgating regulations applicable to commercial and industrial solid waste incinerators, it is particularly important to distinguish between units that will be regulated as boilers as well as other devices whose primary purpose is energy recovery (such as process heaters), and devices that will be regulated as incinerators under section 129 of the CAA. The distinction is necessary to avoid dual regulation of the many combustion units in use at commercial and industrial facilities that function as energy recovery devices and may be subject to regulation under other sections of the CAA.

Our proposed definitions of solid waste and CISWI unit reflected this broad principle of distinguishing boilers and other energy recovery devices from incinerators. However, as explained below, our proposed definitions proved inadequate to distinguish boilers from incinerators within the category of sources. Therefore, in the final NSPS and EG, we have modified our definitions of solid waste and CISWI unit.

For purposes of this rule, we are adopting a revised definition of solid waste that reflects the definition in the Solid Waste Disposal Act (SWDA) and which is reiterated in the regulation promulgated by the Administrator pursuant to the SWDA. We emphasize that the definition is adopted solely for purposes of section 129 in order to implement the principles of that section. We note that the RCRA regulatory definition of solid waste, which effectively determines the scope of the regulatory program for hazardous wastes (since hazardous wastes are a subset of solid wastes (see RCRA section 1004(5)), defines secondary materials burned for energy recovery as solid wastes (40 CFR 261.2(c)(2)). The classification implements both an explicit directive in RCRA to regulate wastes burned for energy recovery (RCRA sections 3004(q), (r) and (s)), as

well as the RCRA statutory definition of solid waste. See also *Horsehead Resource Development Corp. v. Browner*, 16 F. 3d 1246 (D.C. Cir. 1994) (upholding the rules implementing RCRA section 3004(q)). We reemphasize that the final CISWI NSPS and EG in no way affect those existing (and long-standing) RCRA provisions or reflect any type of Agency decision about the permissible scope of the RCRA statutory definition of solid waste. Our purpose here is only to adapt that definition to reflect the regulatory purpose of CAA section 129.

Many commenters stated that the definitions of solid waste and CISWI unit in the proposed NSPS and EG were too broad, and, therefore, would inappropriately cover some boilers, process heaters, and possibly other units that recover energy from the burning of fuels. The commenters stated their belief that commercial and industrial combustion units that recover energy were intended to be regulated under section 112 of the CAA, and that only incinerators that burn wastes for destruction alone were intended to be regulated as CISWI units.

The comments pointed to two primary reasons why the proposed NSPS and EG for CISWI units would inadvertently cover some units that recover energy, such as boilers and process heaters. First, many legitimate energy recovery units are physically separated from their associated energy recovery systems. The units would not meet the requirement that heat recovery must be part of a unit's "integral" design for it not to be considered a CISWI unit. Second, the universe of materials burned for energy recovery is much broader than those defined as "fuels." For example, several of today's combustion technologies and some new emerging technologies can burn materials for energy recovery having heat values less than the proposed 5,000 British thermal units per pound (Btu/lb) threshold for considering a material a fuel.

As a result, the commenters suggested that the NSPS and EG for CISWI units be changed so that units that recover energy not be considered incinerators. Without such a change, units could be regulated both as CISWI units under section 129 and as boilers, for example, under section 112. Such a potential overlap in regulations could create confusion as well as inconsistent and conflicting regulatory requirements, according to some commenters.

We agree that units physically separated from their associated energy recovery systems may be legitimate energy recovery devices. Therefore, we

have deleted from the final NSPS and EG the requirement for energy recovery to be part of the unit's "integral" design for it not to be considered a CISWI unit. Additionally, we have added a definition of energy recovery. Furthermore, we agree that several of today's combustion technologies, including some emerging technologies, may be capable of burning materials with a heat value of less than 5,000 Btu/lb to recover energy. Therefore, we have deleted the requirement from the definition of solid waste in the final NSPS and EG.

As we indicated in the preamble to the November 1999 proposal, the main purpose of the proposed definition of nonhazardous solid waste was to identify which materials when burned by CISWI units would be subject to regulations developed under section 129, and which materials when burned would be subject to regulations to be developed under section 112. Consideration of the above comments led us to conclude that the proposed definitions of "CISWI unit" and "solid waste" created the potential for overlap with rules we are developing under section 112, such as the boiler MACT.

The primary difference between incinerators and boilers is that incinerators burn materials for the purpose of disposal, whereas boilers burn materials for the purpose of recovering energy. Thus, we believe the concept of energy recovery is the key to distinguishing between CISWI units (which will be regulated under section 129) and boilers (which will be regulated under section 112). Specifically, commercial and industrial units burning materials without energy recovery are disposing of the materials, that is, they are treating such materials as commercial or industrial waste, and they should be regulated as CISWI units under section 129. In contrast, commercial and industrial units burning materials with energy recovery, that is, treating such materials as fuel, should be regulated under section 112.

In order to address the concerns raised by commenters, and to provide a clear distinction between CISWI units and combustion devices that will be covered by regulations promulgated under section 112 of the CAA, we have included in the final NSPS and EG a definition of "commercial and industrial waste." We define commercial and industrial waste as any solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and

custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

With the changes, we believe the final NSPS and EG will avoid the possibility of double coverage under section 129 and section 112.

#### *D. Which Elements of the Definition of Solid Waste Have Been Retained and Clarified?*

For additional clarity, the exemptions from the CISWI rules for units burning municipal solid waste, hospital/medical/infectious waste, and hazardous wastes under the RCRA have been retained and are now included in the applicability sections (§ 60.2020 of the NSPS; § 60.2555 of the EG). The solid waste definition refers to the exemptions from the CISWI NSPS and EG. In addition, the exemption for units that burn materials for the purpose of recovering their chemical constituents is now included in the applicability sections of the CISWI NSPS and EG. The exemption has also been expanded by increasing the list of units that burn materials for the purpose of recovering their chemical constituents. Owners or operators who believe their unit is not a CISWI unit may petition the Administrator to add their unit to the list.

Finally, one commenter stated that the definition of solid waste in 40 CFR part 261 applies to nonhazardous solid waste. Therefore, the commenter believes that EPA must use that definition and is not free to redefine solid waste for the purpose of section 129.

Section 129 does not define nonhazardous solid waste, but directs EPA to use the meaning of solid waste established by the Administrator pursuant to the SWDA. To develop and implement the hazardous waste regulatory program authorized by the SWDA, the Administrator adopted a definition of hazardous waste pursuant to the SWDA. It is true that 40 CFR part 261 defines solid waste; however, 40 CFR 261.1(b)(1) states explicitly that the definition is only for the purpose of materials that are hazardous wastes.

The Administrator has included in the final NSPS and EG the definition of solid waste from the SWDA and is establishing the definition jointly under the authority of the CAA and the SWDA. The purpose of the definition is solely to identify nonhazardous solid waste for the purpose of the CISWI regulations.

#### *E. Were Significant Issues Raised Regarding EPA's Approach to Setting the Proposed Standards and Guidelines, and Has EPA Made Any Changes?*

The significant comments received on EPA's approach to setting the standards and guidelines, and the changes that have been made in response to these comments, are discussed below.

##### *1. What Is EPA's General Approach to Setting the MACT Floors?*

One commenter stated that EPA's technology-based approach to determining the MACT floors is unlawful and that the resulting MACT floors do not reasonably reflect the actual performance of the best performing 12 percent of existing units or the expected performance of the best controlled similar unit. Moreover, the commenter stated that the "worst emission test result for any unit using a particular technology does not reasonably reflect the actual performance of the best performing unit." As a result, the commenter concluded that the MACT emission limitations are not as stringent as the CAA requires. Generally, we disagree with the commenter for the following reasons.

Section 129(a)(2) of the CAA specifies that the emission limitations for existing units shall not be less stringent than the average emission limitation achieved by the best performing 12 percent of units in the category, and for new units shall not be less stringent than the emission control that is achieved in practice by the best controlled similar unit. The emission limitation associated with the above criteria for a pollutant is referred to as the "MACT floor" for that pollutant. With respect to new units, EPA interprets "achieved in practice" to mean achieved under the worst foreseeable circumstances, consistent with *National Lime Ass'n v. EPA*, 627 F.2d 416, 431 n.46 (DC Cir. 1980). Moreover, EPA views the phrase "best controlled similar source" as encompassing all units using the same control technology as the unit with the best observed performance, rather than just that unit itself. Consequently, the MACT floor for new units is based on the highest data point from a unit using the "best" technology, since such a value is a reasonable estimate of the performance of the "best controlled similar unit" under the worst foreseeable circumstances. The approach is reasonable because the most informative way to predict the worst reasonably foreseeable performance of the best controlled unit, with the available data, is to examine the

performance of other units that use the same control technology. In other words, EPA considers all units with the same control technology to be equally well controlled, and each unit with the best control technology is a "best controlled similar unit" even if the emissions test results from such units vary considerably.

As discussed at proposal, to determine the MACT floors for the pollutants listed in section 129 of the CAA, we examined our CISWI unit database to identify the various emission control technologies (including the absence of emission control technology) that were in use on CISWI units. We then ranked the technologies on a pollutant-by-pollutant basis in terms of their emission control performance capabilities. For example, wet scrubbers (and fabric filters in the case of particulate emissions) were ranked higher than other technologies because they are capable of greater emissions reductions.

Using the ranking of emission control technologies, we were able to identify for each pollutant the best performing CISWI units. Because comprehensive emission test data are not available for each of the best performing CISWI units, we were unable to identify the specific emission control performance achieved by each unit. As a result, we considered the best performing CISWI units which used the same emission control technology as equally well controlled.

We then examined the best performing 12 percent of CISWI units, as well as the best performing CISWI unit, to identify the emission control technology which represents the MACT floor for each pollutant for existing and new CISWI units. For existing units, this was accomplished by identifying the emission control technology used by the median of the best performing 12 percent of units (*i.e.*, the CISWI unit representing the 94th percentile). (Because technologies cannot be "averaged" in the same way that numbers are averaged, the average performance of the emission control technology used by the best performing 12 percent of units is best represented by the technology in the middle of the range of the best performing 12 percent of units, *i.e.*, the median.) Similarly, for new units, this was accomplished by identifying the emission control technology used by the best performing CISWI unit for each pollutant.

Using this approach, the emission control technology identified as representing the MACT floor for each pollutant was determined to be the same for both new and existing CISWI units. As discussed at proposal, the use of a

wet scrubbing system, or other equivalent emission control technology (such as use of a fabric filter system for particulate matter control), is the emission control technology which represents the MACT floor for both existing and new CISWI units. The MACT floor can be identified, therefore, by determining the emission limitations which are achieved by wet scrubbing systems on CISWI units.

As a result, having identified the emission control technology which represents the MACT floor, it was then necessary to determine the emission limitations "achieved" by this emission control technology for each pollutant. This determination is not, as this one commenter appears to suggest, simply a matter of looking at the test results from a single CISWI unit or generating a numerical average of the test data from all CISWI units employing the MACT technology. Such an approach fails to consider the inherent and unavoidable variability associated with the incinerators in the CISWI category. Consequently, such an approach does not accurately identify the actual emissions performance of existing units that use the MACT technology, or the level of performance which is achievable by a CISWI unit operating with this emission control technology under the worst reasonably foreseeable circumstances.

Examining emission data from a number of CISWI units using the same emission control technology gives us the best picture of the actual performance and the performance capability of this technology. It enables us to take into consideration the inherent variability associated with the incinerators in the CISWI category, and it allows us to identify the emission limitations achieved in practice under the worst reasonably foreseeable circumstances.

There are between 4 and 14 emission tests available for CISWI units controlled by wet scrubbing systems for each pollutant (with the exception of dioxins/furans, mercury, and hydrogen chloride, where fewer tests are available). As expected, there is considerable variation among the emission values from the emission tests for each pollutant as a result of the unavoidable process and operational variability within CISWI units (*e.g.*, variations in waste combusted, incinerator design and operation, etc.). Because this variability occurs among all CISWI units and because there is no clear explanation for this variability, it is reasonable to expect that there will always be a variation in emissions among CISWI units controlled by wet scrubbing systems.

Another way to view this emission variability among CISWI units is to consider each emission test as a "snapshot" of actual performance taken at one moment in time. Taken together, the snapshots provide a picture of the unavoidable variation in emissions expected to occur and recur over time at every similarly controlled CISWI unit. Absent additional information, there is no reason to believe that any observed emission value (*i.e.*, the emission level measured during a test) from a CISWI unit controlled with wet scrubbing could be prevented from occurring at any other CISWI unit also controlled by wet scrubbing.

As a result, the most reasonable methodology for determining the performance of wet scrubbing systems on CISWI units (*i.e.*, the MACT floor) is to examine the emission values for all similarly controlled CISWI units (excluding any emission values from tests that did not represent a proper functioning CISWI unit or wet scrubbing system). Thus, for a given pollutant, the most reasonable estimate of the MACT floor emission limitation "achieved" by the best performing 12 percent of CISWI units (or the best performing CISWI unit) is represented by the highest emission value observed from a CISWI unit using wet scrubbing.

We adopted this approach to ensure that the MACT floor emission limitations represent, as accurately as possible, what the best performing 12 percent of existing units is actually achieving, and what the best performing CISWI unit can be reasonably expected to achieve. Despite the commenters objections, we continue to believe that this is the most appropriate methodology for evaluating the performance of units in the CISWI category, given the inherent and unavoidable variability in emissions among these units and the limited emissions data available. Therefore, we continue using this approach to determine the MACT floors.

## 2. Will EPA Allow Compliance on a Percent Reduction Basis?

Several commenters recommended that we include percent reduction requirements for some pollutants, as alternatives to the emission limitations, to accommodate the variability in emissions among CISWI units.

As outlined above, we believe the emission limitations in the final standards and guidelines reasonably incorporate the variability associated with CISWI units using wet scrubbing systems (which is the basis for MACT as well as the MACT floor). Thus, we do not believe that alternative percentage



reduction requirements are necessary or would serve to provide emission limitation alternatives more representative of the actual performance of CISWI units. For these reasons, EPA is not including percent reduction requirements in the final rule.

### 3. How did EPA Establish Emission Limitations for Dioxins/Furans, Mercury, and Hydrogen Chloride?

Some commenters stated that the emission test data upon which several of the MACT emission limitations were based at proposal were extremely limited and, as a result, the limitations are not necessarily achievable in practice because they may not be representative of actual CISWI unit performance. Several of the commenters suggested that we consider the use of emission data from rulemakings which establish standards for sources that utilize similar emission control equipment under conditions comparable to units in the CISWI category.

As discussed above, a number of emission tests from CISWI units were available to determine the MACT emission limitations for most pollutants. However, for three pollutants, dioxins/furans, mercury, and hydrogen chloride, there were only one or two emission tests from CISWI units. As we noted at proposal, such limited data may not provide a sufficient basis to establish MACT emission limitations for the pollutants in this category (particularly given the degree of variability among CISWI units). Consequently, we decided not to rely only on the emission tests to determine the MACT emission limitations for the three pollutants.

While the provisions of section 129 identify a general minimum stringency for MACT emission limitations, there is nothing about how MACT emission limitations are to be calculated, that is, the provisions do not identify a specific procedure or type of information that EPA must use. Thus, we generally have wide latitude in determining the extent of data gathering necessary to establish emission limitations. We believe it is appropriate to use any data available (such as emission test results, operating permit limitations, engineering calculations, control equipment specifications, or other reliable information) that provide information useful for generating a reasonable estimate of the performance of units within a category.

Accordingly, where the emission data from units within a category are incomplete, we may augment our analysis with supplementary information to determine MACT

emission limitations. Provided that the augmented emission data we use to generate the MACT emission limitations provide a good proxy for the best performing units in the category, it is irrelevant that the actual test data available from units in the category are incomplete. Similarly, if our analysis provides a reasonable representation of the actual performance of units in the category, we may consider relevant supplemental information from any available source. Courts have ruled that EPA need not invest resources to conduct the perfect study, provided that our approach bears a rational relationship to the reality it purports to represent (See *Sierra Club v. EPA*, 167 F. 3d 658, 663 (D.C. Cir. 1999)).

Thus, because emission data for dioxins/furans, mercury, and hydrogen chloride emissions from CISWI units controlled by wet scrubbing systems are extremely limited, we have augmented the data with emission data from similarly controlled units outside of the CISWI category. This approach allows us to better characterize the actual dioxins/furans, mercury, and hydrogen chloride emission limitations achieved by units in the CISWI category by providing additional information regarding the performance of wet scrubbers under conditions similar to those experienced by CISWI units.

Hazardous waste incinerator (HWI) units without waste heat recovery that are controlled with wet scrubbing systems serve as a valuable source of supplementary data for emissions of dioxins/furans. (Units in the CISWI category that were used to establish the emission limitations did not incorporate waste heat recovery, and it is not the intent of this rulemaking to cover such units.) These types of HWI units are generally similar to CISWI units that are controlled by wet scrubbing systems. Thus, it is reasonable to conclude that the emissions performance of HWI units without waste heat boilers and controlled with wet scrubbing systems is comparable to that of CISWI units controlled with wet scrubbing systems.

As a result, we combined dioxins/furans emission data from HWI units without waste heat recovery boilers and controlled with wet scrubbing systems with the dioxins/furans emission data for CISWI units controlled with wet scrubbing systems. We then determined the MACT emission limitation for dioxins/furans as discussed above. The resulting emission limitation included in the final NSPS and EG is 0.41 nanograms per dry standard cubic meter (ng/dscm) toxic equivalency (TEQ) (Standards of Performance for New Stationary Sources and Emission

Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Notice of Data Availability, August 28, 2000, 65 FR 52058).

Unfortunately, with respect to the other two pollutants for which CISWI test data are extremely limited (mercury and hydrogen chloride), it is inappropriate to use emission data from HWI units to supplement the CISWI unit data. The mercury and hydrogen chloride emission data available from HWI units are based on the use of a different emission control technology than wet scrubbing systems, and this prevents us from combining mercury and hydrogen chloride emission data from HWI units with that from CISWI units. Since appropriate HWI data were not available, we identified another source of data to augment mercury and hydrogen chloride emission data from CISWI units controlled by wet scrubbing systems.

Hospital, medical, and infectious waste incinerator (HMIWI) units controlled with wet scrubbing systems serve as a valuable source of supplementary data for mercury and hydrogen chloride. Those HMIWI units are also generally similar to CISWI units that are controlled by wet scrubbing systems. Thus, it is reasonable to conclude that the mercury and hydrogen chloride emission performance achieved by HMIWI units controlled with wet scrubbing systems is comparable to that of CISWI units controlled with wet scrubbing systems.

As a result, we combined mercury and hydrogen chloride emission data from HMIWI units controlled with wet scrubbing systems with the mercury and hydrogen chloride emission data from CISWI units controlled with wet scrubbing systems. We then determined the emission limitations for mercury and hydrogen chloride as discussed above. The resulting emission limitations included in the final NSPS and EG are 0.47 mg/dscm for mercury and 62 parts per million by volume, dry basis (ppmdv) for hydrogen chloride (Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Notice of Data Availability, August 28, 2000, 65 FR 52058).

This process for augmenting the CISWI data with appropriate HWI or HMIWI data results in dioxins/furans, mercury, and hydrogen chloride emission limitations which more accurately represent the levels of such emissions actually achieved by CISWI units employing the MACT technology

(wet scrubbing systems). This approach to developing the emission limitations provides a reasonable proxy for the actual performance of the best performing CISWI units and is the most appropriate method, under the circumstances, for EPA to identify the emission limitations that are achieved by such units.

(**Note:** While we believe that emission data for dioxins/furans, mercury, and hydrogen chloride from the HWI and HMIWI categories are useful for augmenting the CISWI data where insufficient CISWI emission data are available, we do not believe that HWI, HMIWI, and CISWI units should generally be characterized as similar units for the purpose of determining MACT emission limitations for all CISWI pollutants.)

#### 4. How did EPA Establish Emission Limitations for Lead and Cadmium?

In reviewing the CISWI database to address comments following proposal,

we found that, despite our earlier efforts to rigorously screen the database, the unit responsible for the highest recorded emissions of lead and cadmium (which drove the MACT emission limitations for the pollutants) was not a CISWI unit. As a result, this unit was removed from the CISWI database, resulting in a change in the lead and cadmium MACT emission limitations. Following the methodology outlined above, the final MACT emission limitations included in the final NSPS and EG are 0.04 mg/dscm for lead and 0.004 mg/dscm for cadmium.

#### IV. Impacts of the Final NSPS and EG

The air impacts of the NSPS and EG were reestimated as a result of revising the emission limitations for new and existing CISWI units. Because the estimates of water, solid waste, energy, cost, and economic impacts depend

solely on the technology upon which the MACT limits are based, and because the technology remains the same as proposed, there were no changes in other impacts.

#### A. What Are the Air Impacts for New Units?

To illustrate the potential emissions reductions achieved by the NSPS with respect to new CISWI units, we modeled hypothetical CISWI units with capacities of 100 and 1,500 pounds per hour (lb/hr) (45 and 680 kilograms per hour (kg/hr)) and estimated the impacts associated with application of wet scrubbers. The resulting impact estimates (i.e., the difference in emissions between a CISWI unit with a wet scrubber and an uncontrolled CISWI unit) are presented in Table 3 of this preamble.

TABLE 3.—EMISSIONS REDUCTIONS ON A MODEL UNIT BASIS

Pollutant	Emissions Reduction, tons/yr (Mg/yr)			
	100 lb/hr		1500 lb/hr	
	(45 kg/hr)	Capacity	(680 kg/hr)	Capacity
Cadmium .....	$1.5 \times 10^{-5}$	$(1.4 \times 10^{-5})$	$3.1 \times 10^{-4}$	$(2.8 \times 10^{-4})$
Dioxins/furans (TEQ) .....	$2.0 \times 10^{-9}$	$(1.8 \times 10^{-9})$	$4.2 \times 10^{-8}$	$(3.9 \times 10^{-8})$
Hydrogen chloride .....	1.5	(1.4)	32.3	(29.3)
Lead .....	$1.9 \times 10^{-4}$	$(1.7 \times 10^{-4})$	$4.0 \times 10^{-3}$	$(3.6 \times 10^{-3})$
Mercury .....	$6.5 \times 10^{-4}$	$(5.9 \times 10^{-4})$	0.01	(0.01)
Particulate matter .....	0.50	(0.45)	10.8	(9.8)
Sulfur dioxide .....	0.38	(0.35)	7.9	(7.2)

#### B. What are the air impacts for existing units?

Table 4 of this preamble summarizes the national air emission impacts of the EG. The impacts are expressed in two ways. First, the impacts are expressed as annual nationwide mass emissions reductions; and second, as percent reductions compared to current estimated national emissions for existing CISWI units.

TABLE 4.—EMISSIONS REDUCTIONS FOR EXISTING CISWI UNITS

Pollutant	National Emissions Reduction		Percent <sup>1</sup>
	Tons/yr	(Mg/yr)	
Cadmium .....	0.01	(0.01)	56
Dioxins/furans (TEQ) .....	$1.8 \times 10^{-6}$	$(1.6 \times 10^{-6})$	65
Hydrogen chloride .....	1315	(1193)	89
Lead .....	0.15	(0.14)	62
Mercury .....	0.56	(0.51)	34
Particulate matter .....	409	(371)	71
Sulfur dioxide .....	324	(294)	72

<sup>1</sup> Percent reduction from current (baseline) emissions.

#### V. Administrative Requirements

##### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we must determine whether a regulatory action is "significant" and, therefore, subject to Office of Management and Budget (OMB) review and the requirements of

the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more, or adversely affects in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or

State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB has notified us that it considers this a "significant regulatory action" within the meaning of the Executive Order. As a result, we submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

Section 129 of the CAA requires EPA to adopt NSPS and EG for CISWI units. These NSPS and EG must be based on MACT, which is defined as the maximum degree of reduction in emissions of air pollutants, taking into consideration the cost of achieving the reductions and any nonair quality health and environmental impacts and energy requirements, that the Administrator determines is achievable. The MACT for the NSPS must be no less stringent than the emission reduction achieved by the best controlled source, and MACT for the EG must be no less stringent than the emission reduction achieved by the average of the best controlled 12 percent of sources. These minimum requirements are referred to as the floor, and more stringent requirements are referred to as beyond-the-floor.

To determine MACT, we examined two alternatives. The first reflected the floor (i.e., wet scrubbing); the second reflected a beyond-the-floor option (i.e., wet scrubbing followed by carbon injection and a fabric filter). Taking into consideration the cost of achieving the emission reductions and any nonair quality health and environmental impacts and energy requirements, the Administrator determined that the first alternative is MACT.

The total national annualized cost impact of this regulatory action is estimated as \$11.6 million per year, assuming those CISWI units currently operating without wet scrubbers would install wet scrubbers in order to comply with the emission limits in the NSPS and EG. As a result, emissions (consisting primarily of hydrogen chloride, particulate matter, and sulfur dioxide) would be reduced by 2048 tons per year.

#### *B. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires us to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have

federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under section 6 of Executive Order 13132, we may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or we consult with State and local officials early in the process of developing the regulation. We also may not issue a regulation that has federalism implications and that preempts State law unless we consult with State and local officials early in the process of developing the proposed regulation.

If we comply by consulting, Executive Order 13132 requires us to provide to the OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement. The federalism summary impact statement must include a description of the extent of our prior consultation with State and local officials, a summary of the nature of their concerns and our position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when we transmit a draft final rule with federalism implications to OMB for review pursuant to Executive Order 12866, we must include a certification from the agency's federalism official stating that we have met the requirements of Executive Order 13132 in a meaningful and timely manner.

This rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This rule establishes national performance standards and other requirements for certain solid waste incineration units. We are required by section 129 of the CAA, 42 U.S.C. 7429, to establish the standards and guidelines embodied in this rule. This regulation primarily affects private industry and does not impose significant economic costs on State or local governments. The standards established by this rule apply to new facilities that operate commercial or industrial incineration units (and the owners or operators of

such facilities) and require States to submit State plans that include standards applicable to existing incineration units that are at least as protective as the standards specified in the rule. If a State does not submit an approvable plan, any covered incineration units in that State will become subject to a Federal plan to implement this rule. The regulation does not include an express provision preempting State or local regulations. However, once a State or Federal plan is in effect, covered facilities would be subject to the standards established by this rule, regardless of any less protective State or local regulations that contain emission limitations for the pollutants addressed by this rule. To the extent that this might preempt State or local regulations, it does not significantly affect the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Thus, the requirements of section 6 of the Executive Order do not apply to this rule; and we have complied with the requirements of section 4(e), to the extent that they may be applicable to the regulations, by providing notice to potentially affected State and local officials through publication of this rule.

Although section 6 of Executive Order 13132 does not apply to this rule, we consulted with representatives of State and local governments to enable them to provide meaningful and timely input into the development of this rule. This consultation took place during the ICCR FACA committee meetings, where members representing State and local governments participated in developing recommendations for our combustion-related rulemakings, including this rule. Additionally, we sponsored the Small Communities Outreach Project, which involved meetings with elected officials and other government representative to provide them with information about this rule and to solicit their comments. The concerns raised by representatives of State and local governments were considered during the development of this rule.

#### *C. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments*

Under Executive Order 13084, we may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance

costs incurred by the tribal governments, or we consult with those governments. If we comply by consulting, Executive Order 13084 requires us to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of our prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires us to develop an effective process permitting elected officials and other representatives of Indian tribal governments to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.

Today's final rule does not significantly or uniquely affect the communities of Indian tribal governments. We know of no CISWI units owned by Indian tribal governments. However, if there are any, the effect of these rules on communities of tribal governments would not be unique or disproportionate to the effect on other communities. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply.

#### *D. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that we determine: (1) Is "economically significant" as defined under Executive Order 12866, (2) is based on health or safety risks, and (3) for which we have reason to believe may disproportionately affect children. If the regulatory action meets these criteria, we must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives we considered.

We interpret Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks. Additionally, this final rule is not economically significant as defined by Executive Order 12866.

#### *E. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L.

104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, we generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year.

Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before we establish any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, we must develop under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, thereby enabling officials of affected small governments to have meaningful and timely input in the development of the regulatory proposal with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We have determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any 1 year. Thus, this rule is not subject to the requirements of sections 202 and 205 of the UMRA. Additionally, we have determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments.

#### *F. Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.*

The RFA generally requires Federal agencies to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements, unless the agency certifies

that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include businesses, small not-for-profit enterprises, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, a small entity is defined as: (1) a small business who has less than 500 employees, (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000, and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field. The SBA guidelines define a small business based on number of employees or annual revenues, and the size standards vary from industry to industry. Generally, businesses covered by the Standard Industry Codes (SIC) affected by this final rule are considered small if they have less than 500 employees or less than \$5 million in annual sales.

The regulation will affect 112 existing facilities owned by 90 parent companies. Based on Small Business Administration guidelines, 26 of the companies are small businesses. The lumber and wood products industry includes the largest number (seven) of the small businesses, followed by fabricated metals, veterinary hospitals (burning less than 90 percent pathological waste), and wholesale trade sectors with three companies each. The remaining small businesses are distributed across six different industries. If add-on controls are employed to meet the standards, a total of 15 small businesses have cost-to-sales ratios greater than 1 percent; and of the 15 small businesses, 9 have cost-to-sales ratios that exceed 3 percent (ranging from 3.4 to 27.7 percent with a median of 4 percent). The nine entities with cost-to-sales ratios greater than three percent incinerate relatively small amounts of material. Therefore, it is reasonable to assume the businesses will seek an alternative method of disposal rather than bearing the cost of installing add-on equipment. Since the median amount of material incinerated by the nine companies is only about 50 tons per year, the alternative net cost for sending waste to a landfill for many of the facilities is expected to be less than the control costs, based on an estimated total alternative disposal cost (*i.e.*, transportation and storage costs plus tipping fee) of about \$58 per ton. The cost of using an off-site landfill for the median amount of material is estimated to be about \$2,900 per year. Thus, it

may be economically feasible for some of these small entities to switch to an alternative disposal method, such as off-site landfills, and lower their net compliance costs.

Based on the low number of affected small entities in each individual market, the alternative method of waste disposal available, and the relatively low control cost, this analysis suggests that the regulation should not generate a significant small business impact on a substantial number of small entities in the commercial and industrial sectors. EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. EPA has also determined that this rule will not have a significant economic impact on a substantial number of small entities.

#### G. Paperwork Reduction Act

The information collection requirements in this final rule have been

submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) documents have been prepared (ICR No. 1926.02 for subpart CCCC and 1927.02 for subpart DDDD), and copies may be obtained from Sandy Farmer by mail at U.S. Environmental Protection Agency, Office of Environmental Information, Collection Strategies Division (2822), 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at farmer.sandy@epa.gov, or by calling (202) 260-2740. Copies may also be downloaded from the internet at <http://www.epa.gov/icr>.

The NSPS and EG contain monitoring, reporting, and recordkeeping requirements. The information will be used to identify new, modified, or reconstructed incineration units subject to the NSPS and to ensure that new incineration units undergo a siting

analysis and that the analysis is reviewed by the public. Records and reports are necessary to enable us to identify waste incineration units that may not be in compliance with the requirements. Based on reported information, we would decide which units and what records or processes should be inspected.

These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to us for which a claim of confidentiality is made will be safeguarded according to our policies in 40 CFR part 2, subpart B, Confidentiality of Business Information.

The estimated average annual burden for the first 3 years after promulgation of the NSPS for industry and the implementing agency is outlined below.

Affected entity	Total hours	Labor costs	Capital costs	O&M costs	Total costs
Industry .....	11,209	\$685,269	\$13,440	\$1,266	\$699,975
Implementing agency .....	794	\$32,608	0	0	\$32,608

We expect the NSPS to affect 18 CISWI units over the first 3 years, based on the assumption that six existing units will be replaced by six new units each year. We estimate the total annualized capital and startup costs for these new units to be \$13,440. Continuous parameter monitoring equipment would be required for new units. When a wet

scrubber is used to meet the emission limitation, monitoring equipment must be installed to monitor maximum charge rate, minimum pressure drop across the wet scrubber (or minimum amperage), minimum scrubber liquor flow rate, and minimum scrubber liquor pH. The estimated total operation, maintenance, and purchase costs for the monitoring

equipment averaged over the first 3 years are expected to be \$1,266. The implementing agency would not incur any capital or startup costs.

The estimated average annual burden for the first 3 years after promulgation of the emission guidelines for industry and the implementing agency is outlined below.

Affected entity	Total hours	Labor costs	Capital costs	O&M costs	Total costs
Industry .....	9,145	\$407,067	\$0	\$0	\$407,067
Implementing agency .....	1,817	\$48,386	0	0	\$48,386

We expect the EG to affect a maximum of 116 units over the first 3 years. We assume that six existing units will be replaced by six new units each year. There are no capital, startup, or operation and maintenance costs for existing units during the first 3 years. The implementing agency would not incur any capital or startup costs.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the

existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for our regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

#### H. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995

(NTTAA), Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note), directs us to use voluntary consensus standards in our regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs us to provide Congress, through OMB, explanations when we decide not to use available and applicable voluntary consensus standards.

Consistent with the NTTAA, we conducted searches to identify voluntary consensus standards for use in process and emissions monitoring.

The search for emissions monitoring procedures identified six voluntary consensus standards that appeared to have possible use in lieu of our standard reference methods. However, after reviewing available standards, we determined that these candidate consensus standards would not be practical due to the potential lack of equivalency, documentation, validation data and other important technical and policy considerations. These six candidate consensus standards are under development and we plan to follow, review and consider adopting them at a later date.

### *I. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. We will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective January 30, 2001.

### **List of Subjects in 40 CFR Part 60**

Environmental protection, Air pollution control, Carbon monoxide, Metals, Nitrogen dioxide, Particulate matter, Sulfur oxides, Waste treatment and disposal.

Dated: November 15, 2000.

**Carol M. Browner,**  
*Administrator.*

For the reasons stated in the preamble, title 40, chapter I, part 60 of the Code of Federal Regulations is amended as follows:

### **PART 60—[AMENDED]**

1. The authority citation for part 60 continues to read as follows:

**Authority:** 42 U.S.C. 7401, 7411, 7414, 7416, 7429, and 7601.

2. Part 60 is amended by adding subpart CCCC to read as follows:

### **Subpart CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001.**

Sec.

#### **Introduction**

- 60.2000 What does this subpart do?  
60.2005 When does this subpart become effective?

#### **Applicability**

- 60.2010 Does this subpart apply to my incineration unit?  
60.2015 What is a new incineration unit?  
60.2020 What combustion units are exempt from this subpart?  
60.2025 What if my chemical recovery unit is not listed in § 60.2020(n)?  
60.2030 Who implements and enforces this subpart?  
60.2035 How are these new source performance standards structured?  
60.2040 Do all eleven components of the new source performance standards apply at the same time?

#### **Preconstruction Siting Analysis**

- 60.2045 Who must prepare a siting analysis?  
60.2050 What is a siting analysis?

#### **Waste Management Plan**

- 60.2055 What is a waste management plan?  
60.2060 When must I submit my waste management plan?  
60.2065 What should I include in my waste management plan?

#### **Operator Training and Qualification**

- 60.2070 What are the operator training and qualification requirements?  
60.2075 When must the operator training course be completed?  
60.2080 How do I obtain my operator qualification?  
60.2085 How do I maintain my operator qualification?  
60.2090 How do I renew my lapsed operator qualification?  
60.2095 What site-specific documentation is required?  
60.2100 What if all the qualified operators are temporarily not accessible?

#### **Emission Limitations and Operating Limits**

- 60.2105 What emission limitations must I meet and by when?  
60.2110 What operating limits must I meet and by when?  
60.2115 What if I do not use a wet scrubber to comply with the emission limitations?  
60.2120 What happens during periods of startup, shutdown, and malfunction?

#### **Performance Testing**

- 60.2125 How do I conduct the initial and annual performance test?  
60.2130 How are the performance test data used?

#### **Initial Compliance Requirements**

- 60.2135 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?  
60.2140 By what date must I conduct the initial performance test?

#### **Continuous Compliance Requirements**

- 60.2145 How do I demonstrate continuous compliance with the emission limitations and the operating limits?  
60.2150 By what date must I conduct the annual performance test?  
60.2155 May I conduct performance testing less often?  
60.2160 May I conduct a repeat performance test to establish new operating limits?

#### **Monitoring**

- 60.2165 What monitoring equipment must I install and what parameters must I monitor?  
60.2170 Is there a minimum amount of monitoring data I must obtain?

#### **Recordkeeping and Reporting**

- 60.2175 What records must I keep?  
60.2180 Where and in what format must I keep my records?  
60.2185 What reports must I submit?  
60.2190 What must I submit prior to commencing construction?  
60.2195 What information must I submit prior to initial startup?  
60.2200 What information must I submit following my initial performance test?  
60.2205 When must I submit my annual report?  
60.2210 What information must I include in my annual report?  
60.2215 What else must I report if I have a deviation from the operating limits or the emission limitations?  
60.2220 What must I include in the deviation report?  
60.2225 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?  
60.2230 Are there any other notifications or reports that I must submit?  
60.2235 In what form can I submit my reports?  
60.2240 Can reporting dates be changed?

#### **Title V Operating Permits**

- 60.2242 Am I required to apply for and obtain a title V operating permit for my unit?

#### **Air Curtain Incinerators**

- 60.2245 What is an air curtain incinerator?  
60.2250 What are the emission limitations for air curtain incinerators?  
60.2255 How must I monitor opacity for air curtain incinerators?  
60.2260 What are the recordkeeping and reporting requirements for air curtain incinerators?

#### **Definitions**

- 60.2265 What definitions must I know?

#### **Tables to Subpart CCCC**

- Table 1 to Subpart CCCC—Emission Limitations

Table 2 to Subpart CCCC—Operating Limits for Wet Scrubbers  
 Table 3 to Subpart CCCC—Toxic Equivalency Factors  
 Table 4 to Subpart CCCC—Summary of Reporting Requirements

## Introduction

### § 60.2000 What does this subpart do?

This subpart establishes new source performance standards for commercial and industrial solid waste incineration (CISWI) units.

### § 60.2005 When does this subpart become effective?

This subpart takes effect on June 1, 2001. Some of the requirements in this subpart apply to planning the CISWI unit and must be completed even before construction is initiated on the CISWI unit (i.e., the preconstruction requirements in §§ 60.2045 and 60.2050). Other requirements such as the emission limitations and operating limits apply after the CISWI unit begins operation.

## Applicability

### § 60.2010 Does this subpart apply to my incineration unit?

Yes, if your incineration unit meets all the requirements specified in paragraphs (a) through (c) of this section.

(a) Your incineration unit is a new incineration unit as defined in § 60.2015.

(b) Your incineration unit is a CISWI unit as defined in § 60.2265.

(c) Your incineration unit is not exempt under § 60.2020.

### § 60.2015 What is a new incineration unit?

(a) A new incineration unit is an incineration unit that meets either of the two criteria specified in paragraph (a)(1) or (2) of this section.

(1) Commenced construction after November 30, 1999.

(2) Commenced reconstruction or modification on or after June 1, 2001.

(b) This subpart does not affect your incineration unit if you make physical or operational changes to your incineration unit primarily to comply with the emission guidelines in subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units). Such changes do not qualify as reconstruction or modification under this subpart.

### § 60.2020 What combustion units are exempt from this subpart?

This subpart exempts fifteen types of units described in paragraphs (a) through (o) of this section.

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

(b) *Agricultural waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of agricultural wastes as defined in § 60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of agricultural waste burned, and the weight of all other fuels and wastes burned in the unit.

(c) *Municipal waste combustion units.* Incineration units that meet either of the two criteria specified in paragraph (c)(1) or (2) of this section.

(1) Are regulated under subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors that are Constructed on or Before September 20, 1994); AAAA of this part (Standards of Performance for New Stationary Sources: Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units).

(2) Burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in subpart Ea, subpart Eb, subpart AAAA, and subpart BBBB of this part, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) Notify the Administrator that the unit meets these criteria.

(ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ce of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements specified in paragraphs (e)(1) through (3) of this section.

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(3) You notify the Administrator that the unit meets all of these criteria.

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(1) through (3) of this section.

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You notify the Administrator that the unit meets all of these criteria.

(g) *Hazardous waste combustion units.* Units that meet either of the two criteria specified in paragraph (g)(1) or (2) of this section.

(1) Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(2) Units regulated under subpart EEE of 40 CFR part 63 (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260).

(1) 100 percent wood waste.



(2) 100 percent clean lumber.  
 (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.  
 (j) *Cyclonic barrel burners*. (See § 60.2265)

(k) *Rack, part, and drum reclamation units*. (See § 60.2265)

(l) *Cement kilns*. Kilns regulated under subpart LLL of part 63 of this chapter (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

(m) *Sewage sludge incinerators*. Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Chemical recovery units*. Combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. The seven types of units described in paragraphs (n)(1) through (7) of this section are considered chemical recovery units.

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid.

(3) Units burning only wood or coal feedstock for the production of charcoal.

(4) Units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

(7) Units burning only photographic film to recover silver.

(o) *Laboratory Analysis Units*. Units that burn samples of materials for the purpose of chemical or physical analysis.

#### **§ 60.2025 What if my chemical recovery unit is not listed in § 60.2020(n)?**

(a) If your chemical recovery unit is not listed in § 60.2020(n), you can petition the Administrator to add your unit to the list. The petition must contain the six items in paragraphs (a)(1) through (6) of this section.

(1) A description of the source of the materials being burned.

(2) A description of the composition of the materials being burned, highlighting the chemical constituents in these materials that are recovered.

(3) A description (including a process flow diagram) of the process in which the materials are burned, highlighting the type, design, and operation of the equipment used in this process.

(4) A description (including a process flow diagram) of the chemical constituent recovery process, highlighting the type, design, and operation of the equipment used in this process.

(5) A description of the commercial markets for the recovered chemical constituents and their use.

(6) The composition of the recovered chemical constituents and the composition of these chemical constituents as they are bought and sold in commercial markets.

(b) Until the Administrator approves your petition, the incineration unit is covered by this subpart.

(c) If a petition is approved, the Administrator will amend § 60.2020(n) to add the unit to the list of chemical recovery units.

#### **§ 60.2030 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (7) of this section.

(1) Approval of alternatives to the emission limitations in Table 1 of this subpart and operating limits established under § 60.2110.

(2) Approval of major alternatives to test methods.

(3) Approval of major alternatives to monitoring.

(4) Approval of major alternatives to recordkeeping and reporting.

(5) The requirements in § 60.2025.

(6) The requirements in § 60.2115.

(7) The requirements in § 60.2100(b)(2).

#### **§ 60.2035 How are these new source performance standards structured?**

These new source performance standards contain the eleven major components listed in paragraphs (a) through (k) of this section.

(a) Preconstruction siting analysis.

(b) Waste management plan.

(c) Operator training and qualification.

(d) Emission limitations and operating limits.

(e) Performance testing.

(f) Initial compliance requirements.

(g) Continuous compliance requirements.

(h) Monitoring.

(i) Recordkeeping and reporting.

(j) Definitions.

(k) Tables.

#### **§ 60.2040 Do all eleven components of these new source performance standards apply at the same time?**

No. You must meet the preconstruction siting analysis and waste management plan requirements before you commence construction of the CISWI unit. The operator training and qualification, emission limitations, operating limits, performance testing and compliance, monitoring, and most recordkeeping and reporting requirements are met after the CISWI unit begins operation.

#### **Preconstruction Siting Analysis**

##### **§ 60.2045 Who must prepare a siting analysis?**

(a) You must prepare a siting analysis if you plan to commence construction of a CISWI unit after December 1, 2000.

(b) You must prepare a siting analysis if you are required to submit an initial application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, as applicable, for the reconstruction or modification of your CISWI unit.

##### **§ 60.2050 What is a siting analysis?**

(a) The siting analysis must consider air pollution control alternatives that minimize, on a site-specific basis, to the maximum extent practicable, potential risks to public health or the environment. In considering such alternatives, the analysis may consider costs, energy impacts, nonair environmental impacts, or any other factors related to the practicability of the alternatives.

(b) Analyses of your CISWI unit's impacts that are prepared to comply with State, local, or other Federal regulatory requirements may be used to



satisfy the requirements of this section, provided they include the consideration of air pollution control alternatives specified in paragraph (a) of this section.

(c) You must complete and submit the siting requirements of this section as required under § 60.2190(c) prior to commencing construction.

#### **Waste Management Plan**

##### **§ 60.2055 What is a waste management plan?**

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

##### **§ 60.2060 When must I submit my waste management plan?**

You must submit a waste management plan prior to commencing construction.

##### **§ 60.2065 What should I include in my waste management plan?**

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures and implement those measures the source considers practical and feasible, considering the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

#### **Operator Training and Qualification**

##### **§ 60.2070 What are the operator training and qualification requirements?**

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2100.

(b) Operator training and qualification must be obtained through a State-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described

in paragraphs (c)(1) through (3) of this section.

(1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (if applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Actions to correct malfunctions or conditions that may lead to malfunction.

(viii) Bottom and fly ash characteristics and handling procedures.

(ix) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(x) Pollution prevention.

(xi) Waste management practices.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that may serve as reference material following completion of the course.

##### **§ 60.2075 When must the operator training course be completed?**

The operator training course must be completed by the later of the three dates specified in paragraphs (a) through (c) of this section.

(a) Six months after your CISWI unit startup.

(b) December 3, 2001.

(c) The date before an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

##### **§ 60.2080 How do I obtain my operator qualification?**

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2070(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2070(c)(2).

##### **§ 60.2085 How do I maintain my operator qualification?**

To maintain qualification, you must complete an annual review or refresher

course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.

(c) Inspection and maintenance.

(d) Responses to malfunctions or conditions that may lead to malfunction.

(e) Discussion of operating problems encountered by attendees.

##### **§ 60.2090 How do I renew my lapsed operator qualification?**

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2085.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2080(a).

##### **§ 60.2095 What site-specific documentation is required?**

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

(1) Summary of the applicable standards under this subpart.

(2) Procedures for receiving, handling, and charging waste.

(3) Incinerator startup, shutdown, and malfunction procedures.

(4) Procedures for maintaining proper combustion air supply levels.

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.

(6) Monitoring procedures for demonstrating compliance with the incinerator operating limits.

(7) Reporting and recordkeeping procedures.

(8) The waste management plan required under §§ 60.2055 through 60.2065.

(9) Procedures for handling ash.

(10) A list of the wastes burned during the performance test.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator.

(1) The initial review of the information listed in paragraph (a) of this section must be conducted within

6 months after the effective date of this subpart or prior to an employee's assumption of responsibilities for operation of the CISWI unit, whichever date is later.

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted not later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section.

(1) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2095(a) as required by § 60.2095(b), including the date of the initial review and all subsequent annual reviews.

(2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2070, met the criteria for qualification under § 60.2080, and maintained or renewed their qualification under § 60.2085 or § 60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

#### **§ 60.2100 What if all the qualified operators are temporarily not accessible?**

If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 60.2095(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2210.

(b) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible,

and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section.

(i) A qualified operator is accessible as required under § 60.2070(a).

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

#### **Emission Limitations and Operating Limits**

##### **§ 60.2105 What emission limitations must I meet and by when?**

You must meet the emission limitations specified in Table 1 of this subpart 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

##### **§ 60.2110 What operating limits must I meet and by when?**

(a) If you use a wet scrubber to comply with the emission limitations, you must establish operating limits for four operating parameters (as specified in Table 2 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test.

(1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii), as appropriate.

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet scrubber, which is calculated as 90

percent of the average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as 90 percent of the average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquor flow rate, which is calculated as 90 percent of the average liquor flow rate at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as 90 percent of the average liquor pH at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

(b) You must meet the operating limits established during the initial performance test 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

(c) If you use a fabric filter to comply with the emission limitations, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

##### **§ 60.2115 What if I do not use a wet scrubber to comply with the emission limitations?**

If you use an air pollution control device other than a wet scrubber, or limit emissions in some other manner, to comply with the emission limitations under § 60.2105, you must petition the Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. You must not conduct the initial performance test until after the petition has been approved by the Administrator. Your petition must include the five items listed in paragraphs (a) through (e) of this section.

(a) Identification of the specific parameters you propose to use as additional operating limits.

(b) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

(c) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters.

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

(e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

#### **§ 60.2120 What happens during periods of startup, shutdown, and malfunction?**

(a) The emission limitations and operating limits apply at all times except during CISWI unit startups, shutdowns, or malfunctions.

(b) Each malfunction must last no longer than 3 hours.

#### **Performance Testing**

#### **§ 60.2125 How do I conduct the initial and annual performance test?**

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in § 60.2175(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in Table 1 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using Equation 1 of this section:

$$C_{\text{adj}} = C_{\text{meas}} (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 1})$$

Where:

$C_{\text{adj}}$  = pollutant concentration adjusted to 7 percent oxygen;

$C_{\text{meas}}$  = pollutant concentration measured on a dry basis;

$(20.9 - 7)$  = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$  = oxygen concentration measured on a dry basis, percent.

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (3) of this section.

(1) Measure the concentration of each dioxin/furan tetra-through octachlorinated-congener emitted using EPA Method 23.

(2) For each dioxin/furan (tetra-through octachlorinated) congener measured in accordance with paragraph (g)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this subpart.

(3) Sum the products calculated in accordance with paragraph (g)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

#### **§ 60.2130 How are the performance test data used?**

You use results of performance tests to demonstrate compliance with the emission limitations in Table 1 of this subpart.

#### **Initial Compliance Requirements**

#### **§ 60.2135 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?**

You must conduct an initial performance test, as required under § 60.8, to determine compliance with the emission limitations in Table 1 of this subpart and to establish operating limits using the procedure in § 60.2110 or § 60.2115. The initial performance test must be conducted using the test methods listed in Table 1 of this subpart and the procedures in § 60.2125.

#### **§ 60.2140 By what date must I conduct the initial performance test?**

The initial performance test must be conducted within 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

#### **Continuous Compliance Requirements**

#### **§ 60.2145 How do I demonstrate continuous compliance with the emission limitations and the operating limits?**

(a) You must conduct an annual performance test for particulate matter, hydrogen chloride, and opacity for each CISWI unit as required under § 60.8 to

determine compliance with the emission limitations. The annual performance test must be conducted using the test methods listed in Table 1 of this subpart and the procedures in § 60.2125.

(b) You must continuously monitor the operating parameters specified in § 60.2110 or established under § 60.2115. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour rolling average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under § 60.2115. Operating limits do not apply during performance tests.

(c) You must only burn the same types of waste used to establish operating limits during the performance test.

#### **§ 60.2150 By what date must I conduct the annual performance test?**

You must conduct annual performance tests for particulate matter, hydrogen chloride, and opacity within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

#### **§ 60.2155 May I conduct performance testing less often?**

(a) You can test less often for a given pollutant if you have test data for at least 3 years, and all performance tests for the pollutant (particulate matter, hydrogen chloride, or opacity) over 3 consecutive years show that you comply with the emission limitation. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the 3rd year and no more than 36 months following the previous performance test.

(b) If your CISWI unit continues to meet the emission limitation for particulate matter, hydrogen chloride, or opacity, you may choose to conduct performance tests for these pollutants every 3rd year, but each test must be within 36 months of the previous performance test.

(c) If a performance test shows a deviation from an emission limitation for particulate matter, hydrogen chloride, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 3-year period show compliance.

**§ 60.2160 May I conduct a repeat performance test to establish new operating limits?**

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

**Monitoring**

**§ 60.2165 What monitoring equipment must I install and what parameters must I monitor?**

(a) If you are using a wet scrubber to comply with the emission limitation under § 60.2105, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 2 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 2 of this subpart at all times except as specified in § 60.2170(a).

(b) If you use a fabric filter to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If you are using something other than a wet scrubber to comply with the emission limitations under § 60.2105, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2115.

**§ 60.2170 Is there a minimum amount of monitoring data I must obtain?**

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), you must conduct all monitoring at all times the CISWI unit is operating.

(b) Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing compliance with the operating limits.

**Recordkeeping and Reporting**

**§ 60.2175 What records must I keep?**

You must maintain the fourteen items (as applicable) as specified in paragraphs (a) through (n) of this section for a period of at least 5 years:

(a) Calendar date of each record.

(b) Records of the data described in paragraphs (b)(1) through (6) of this section:

(1) The CISWI unit charge dates, times, weights, and hourly charge rates.

(2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.

(3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable.

(4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under

§ 60.2115, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

(6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 60.2110(c).

(c) Identification of calendar dates and times for which monitoring systems used to monitor operating limits were inoperative, inactive, malfunctioning, or out of control (except for downtime associated with zero and span and other routine calibration checks). Identify the operating parameters not measured, the duration, reasons for not obtaining the data, and a description of corrective actions taken.

(d) Identification of calendar dates, times, and durations of malfunctions, and a description of the malfunction and the corrective action taken.

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in Table 2 of this subpart or a deviation from other operating limits established under § 60.2115 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations.

(g) All documentation produced as a result of the siting requirements of §§ 60.2045 and 60.2050.

(h) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2095(a) as required by § 60.2095(b), including the date of the initial review and all subsequent annual reviews.

(i) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2070, met the criteria for qualification under § 60.2080, and maintained or renewed their qualification under § 60.2085 or § 60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(j) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(k) Records of calibration of any monitoring devices as required under § 60.2165.

(l) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.

(m) The information listed in § 60.2095(a).

(n) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).

**§ 60.2180 Where and in what format must I keep my records?**

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

**§ 60.2185 What reports must I submit?**

See Table 4 of this subpart for a summary of the reporting requirements.

**§ 60.2190 What must I submit prior to commencing construction?**

You must submit a notification prior to commencing construction that includes the five items listed in paragraphs (a) through (e) of this section.

(a) A statement of intent to construct.

(b) The anticipated date of commencement of construction.

(c) All documentation produced as a result of the siting requirements of § 60.2050.

(d) The waste management plan as specified in §§ 60.2055 through 60.2065.

(e) Anticipated date of initial startup.

**§ 60.2195 What information must I submit prior to initial startup?**

You must submit the information specified in paragraphs (a) through (e) of this section prior to initial startup.

(a) The type(s) of waste to be burned.

(b) The maximum design waste burning capacity.

(c) The anticipated maximum charge rate.

(d) If applicable, the petition for site-specific operating limits under § 60.2115.

(e) The anticipated date of initial startup.

**§ 60.2200 What information must I submit following my initial performance test?**

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager.

(a) The complete test report for the initial performance test results obtained under § 60.2135, as applicable.

(b) The values for the site-specific operating limits established in § 60.2110 or § 60.2115.

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 60.2165(b).

**§ 60.2205 When must I submit my annual report?**

You must submit an annual report no later than 12 months following the submission of the information in § 60.2200. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

**§ 60.2210 What information must I include in my annual report?**

The annual report required under § 60.2205 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2215, 60.2220, and 60.2225.

(a) Company name and address.

(b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(c) Date of report and beginning and ending dates of the reporting period.

(d) The values for the operating limits established pursuant to § 60.2110 or § 60.2115.

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the operating limits was inoperative, inactive, malfunctioning or out of control.

(f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 60.2175(b)(6) and (c) through (e) for the calendar year being reported.

(h) If a performance test was conducted during the reporting period, the results of that test.

(i) If you met the requirements of § 60.2155(a) or (b), and did not conduct

a performance test during the reporting period, you must state that you met the requirements of § 60.2155(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks.

**§ 60.2215 What else must I report if I have a deviation from the operating limits or the emission limitations?**

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

**§ 60.2220 What must I include in the deviation report?**

In each report required under § 60.2215, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section.

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements.

(b) The averaged and recorded data for those dates.

(c) Durations and causes of each deviation from the emission limitations or operating limits and your corrective actions.

(d) A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels.

(e) The dates, times, number, duration, and causes for monitor downtime incidents (other than downtime associated with zero, span, and other routine calibration checks).

(f) Whether each deviation occurred during a period of startup, shutdown, or malfunction, or during another period.

**§ 60.2225 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?**

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section.

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section.

(i) A statement of what caused the deviation.

(ii) A description of what you are doing to ensure that a qualified operator is accessible.

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section.

(i) A description of what you are doing to ensure that a qualified operator is accessible.

(ii) The date when you anticipate that a qualified operator will be accessible.

(iii) Request approval from the Administrator to continue operation of the CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2100(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

**§ 60.2230 Are there any other notifications or reports that I must submit?**

Yes. You must submit notifications as provided by § 60.7.

**§ 60.2235 In what form can I submit my reports?**

Submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

**§ 60.2240 Can reporting dates be changed?**

If the Administrator agrees, you may change the semiannual or annual reporting dates. See § 60.19(c) for procedures to seek approval to change your reporting date.

**Title V Operating Permits**

**§ 60.2242 Am I required to apply for and obtain a title V operating permit for my unit?**

Yes. Each CISWI unit must operate pursuant to a permit issued under section 129(e) and title V of the Clean Air Act by the later of the two dates in paragraphs (a) and (b) of this section.

(a) Thirty-six months after December 1, 2000.

(b) The effective date of the title V permit program to which your unit is subject. If your unit is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, being a major source), then your unit may be required to apply for and obtain a title V permit prior to the deadlines noted above. If more than one requirement triggers the requirement to apply for a title V permit, the 12-month timeframe for filing a title V application is triggered by the requirement which first causes the source to be subject to title V.

**Air Curtain Incinerators**

**§ 60.2245 What is an air curtain incinerator?**

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

**§ 60.2250 What are the emission limitations for air curtain incinerators?**

(a) Within 60 days after your air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, you must meet the two limitations specified in paragraphs (a)(1) and (2) of this section.

(1) The opacity limitation is 10 percent (6-minute average), except as described in paragraph (a)(2) of this section.

(2) The opacity limitation is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times, and each malfunction must not exceed 3 hours.

**§ 60.2255 How must I monitor opacity for air curtain incinerators?**

(a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.

(b) Conduct an initial test for opacity as specified in § 60.8.

(c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

**§ 60.2260 What are the recordkeeping and reporting requirements for air curtain incinerators?**

(a) Prior to commencing construction on your air curtain incinerator, submit the three items described in paragraphs (a)(1) through (3) of this section.

(1) Notification of your intent to construct the air curtain incinerators.

(2) Your planned initial startup date.

(3) Types of materials you plan to burn in your air curtain incinerator.

(b) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.

(c) Make all records available for submittal to the Administrator or for an inspector's onsite review.

(d) You must submit the results (each 6-minute average) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.

(f) Keep a copy of the initial and annual reports onsite for a period of 5 years.

**Definitions**

**§ 60.2265 What definitions must I know?**

Terms used but not defined in this subpart are defined in the Clean Air Act and subpart A (General Provisions) of this part.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or Administrator of a State Air Pollution Control Agency.

*Agricultural waste* means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and

floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

*Auxiliary fuel* means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

*Bag leak detection system* means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 consecutive days starting on January 1 and ending on December 31.

*Chemotherapeutic waste* means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

*Clean lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

*Commercial and industrial solid waste incineration (CISWI) unit* means any combustion device that combusts commercial and industrial waste, as defined in this subpart. The boundaries of a CISWI unit are defined as, but not limited to, the commercial or industrial solid waste fuel feed system, grate system, flue gas system, and bottom ash. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the commercial and industrial solid waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber.

(2) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. It includes all ash handling systems connected to the bottom ash handling system.

*Commercial and industrial waste* means solid waste combusted in an enclosed device using controlled flame

combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

*Contained gaseous material* means gases that are in a container when that container is combusted.

*Cyclonic barrel burner* means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, operating limit, or operator qualification and accessibility requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Dioxins/furans* means tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Discard* means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

*Drum reclamation unit* means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

*Energy recovery* means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

*Low-level radioactive waste* means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in

concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

*Modification or modified CISWI unit* means a CISWI unit you have changed later than June 1, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

*Part reclamation unit* means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

*Particulate matter* means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of appendix A of this part.

*Pathological waste* means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

*Rack reclamation unit* means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

*Reconstruction* means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after June 1, 2001.

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit



used to calculate these costs, see the definition of CISWI unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

*Shutdown* means the period of time after all waste has been combusted in the primary chamber.

*Solid waste* means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community

activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2014). For purposes of this subpart and 40 CFR part 60, subpart DDDD, only, solid waste does not include the waste burned in the fifteen types of units described in § 60.2020.

*Standard conditions*, when referring to units of measure, means a temperature of 68°F (20°C) and a pressure of 1 atmosphere (101.3 kilopascals).

*Startup period* means the period of time between the activation of the system and the first charge to the unit.

*Wet scrubber* means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

*Wood waste* means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.

(2) Construction, renovation, or demolition wastes.

(3) Clean lumber.

TABLE 1 TO SUBPART CCCC—EMISSION LIMITATIONS

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Dioxins/furans (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 23 of Appendix A of this part).
Hydrogen chloride .....	62 parts per million by dry volume	3-run average (1 hour volume minimum sample time per run).	Performance test (Method 26A of appendix A of this part).
Lead .....	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Mercury .....	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part).
Opacity .....	10 percent .....	6-minute averages .....	Performance test (Method 9 of appendix A of this part).
Oxides of nitrogen .....	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 7, 7A, 7C, 7D, or 7E of appendix A of this part).
Particulate matter .....	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of this part).
Sulfur dioxide .....	20 parts per million by dry volume	3-run average (1 hour volume minimum sample time per run).	Performance test (Method 6 or 6c of appendix A of this part).

<sup>a</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

TABLE 2 TO SUBPART CCCC—OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitoring using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate .....	Maximum charge rate .....	Continuous .....	Every hour .....	Daily (batch units) 3-hour rolling (continuous and intermittent units) <sup>a</sup>
Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous .....	Every 15 minutes .....	3-hour rolling <sup>a</sup>
Scrubber liquor flow rate .....	Minimum flow rate .....	Continuous .....	Every 15 minutes .....	3-hour rolling <sup>a</sup>
Scrubber liquor pH .....	Minimum pH .....	Continuous .....	Every 15 minutes .....	3-hour rolling <sup>a</sup>

<sup>a</sup> Calculated each hour as the average of the previous 3 operating hours.



TABLE 3 TO SUBPART CCCC—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalence factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin .....	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin .....	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin .....	0.01
octachlorinated dibenzo-p-dioxin .....	0.001
2,3,7,8-tetrachlorinated dibenzofuran .....	0.1
2,3,4,7,8-pentachlorinated dibenzofuran .....	0.5
1,2,3,7,8-pentachlorinated dibenzofuran .....	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran .....	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran .....	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran .....	0.01
octachlorinated dibenzofuran .....	0.001

TABLE 4 TO SUBPART CCCC—SUMMARY OF REPORTING REQUIREMENTS <sup>a</sup>

Report	Due date	Contents	Reference
Preconstruction report ..	Prior to commencing construction .....	<ul style="list-style-type: none"> <li>• Statement of intent to construct .....</li> <li>• Anticipated date of commencement of construction</li> <li>• Documentation for siting requirements</li> <li>• Waste management plan</li> <li>• Anticipated date of initial startup</li> </ul>	§ 60.2190
Startup notification .....	Prior to initial startup .....	<ul style="list-style-type: none"> <li>• Type of waste to be burned .....</li> <li>• Maximum design waste burning capacity</li> <li>• Anticipated maximum charge rate</li> <li>• If applicable, the petition for site-specific operating limits</li> </ul>	§ 60.2195
Initial test report .....	No later than 60 days following the initial performance test	<ul style="list-style-type: none"> <li>• Complete test report for the initial performance test</li> <li>• The values for the site-specific operating limits</li> <li>• Installation of bag leak detection system for fabric filter</li> </ul>	§ 60.2200
Annual report .....	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	<ul style="list-style-type: none"> <li>• Name and address .....</li> <li>• Statement and signature by responsible official</li> <li>• Date of report</li> <li>• Values for the operating limits</li> <li>• If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period</li> <li>• Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported</li> <li>• Information for deviations or malfunctions recorded under § 60.2175(b)(6) and (c) through (e)</li> <li>• If a performance test was conducted during the reporting period, the results of the test</li> <li>• If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2155(a) or (b) were met</li> <li>• Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks</li> </ul>	§§ 60.2205 and 60.2210

TABLE 4 TO SUBPART CCCC—SUMMARY OF REPORTING REQUIREMENTS <sup>a</sup>—Continued

Report	Due date	Contents	Reference
Emission limitation or operating limit deviation report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	<ul style="list-style-type: none"> <li>• Dates and times of deviation .....</li> <li>• Averaged and recorded data for those dates</li> <li>• Duration and causes of each deviation and the corrective actions taken</li> <li>• Copy of operating limit monitoring data and any test reports</li> <li>• Dates, times, and causes for monitor down-time incidents</li> <li>• Whether each deviation occurred during a period of startup, shutdown, or malfunction</li> </ul>	§ 60.2215 and 60.2220
Qualified operator deviation notification.	Within 10 days of deviation .....	<ul style="list-style-type: none"> <li>• Statement of cause of deviation .....</li> <li>• Description of efforts to have an accessible qualified operator</li> <li>• The date a qualified operator will be accessible</li> </ul>	§ 60.2225(a)(1)
Qualified operator deviation status report.	Every 4 weeks following deviation .....	<ul style="list-style-type: none"> <li>• Description of efforts to have an accessible qualified operator</li> <li>• The date a qualified operator will be accessible</li> </ul>	§ 60.2225(a)(2)
Qualified operator deviation notification of resumed operation.	Prior to resuming operation .....	<ul style="list-style-type: none"> <li>• Request for approval to continue operation</li> <li>• Notification that you are resuming operation</li> </ul>	§ 60.2225(b)

<sup>a</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

3. Part 60 is amended by adding subpart DDDD to read as follows:

**Subpart DDDD—Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999**

Sec.

**Introduction**

- 60.2500 What is the purpose of this subpart?
- 60.2505 Am I affected by this subpart?
- 60.2510 Is a State plan required for all States?
- 60.2515 What must I include in my State plan?
- 60.2520 Is there an approval process for my State plan?
- 60.2525 What if my State plan is not approvable?
- 60.2530 Is there an approval process for a negative declaration letter?
- 60.2535 What compliance schedule must I include in my State plan?
- 60.2540 Are there any State plan requirements for this subpart that apply instead of the requirements specified in subpart B?
- 60.2545 Does this subpart directly affect CISWI unit owners and operators in my State?

**Applicability of State Plans**

- 60.2550 What CISWI units must I address in my State plan?
- 60.2555 What combustion units are exempt from my State plan?
- 60.2558 What if a chemical recovery unit is not listed in § 60.2555(n)?

**Use of Model Rule**

- 60.2560 What is the “model rule” in this subpart?
- 60.2565 How does the model rule relate to the required elements of my State plan?
- 60.2570 What are the principal components of the model rule?

**Model Rule—Increments of Progress**

- 60.2575 What are my requirements for meeting increments of progress and achieving final compliance?
- 60.2580 When must I complete each increment of progress?
- 60.2585 What must I include in the notifications of achievement of increments of progress?
- 60.2590 When must I submit the notifications of achievement of increments of progress?
- 60.2595 What if I do not meet an increment of progress?
- 60.2600 How do I comply with the increment of progress for submittal of a control plan?
- 60.2605 How do I comply with the increment of progress for achieving final compliance?
- 60.2610 What must I do if I close my CISWI unit and then restart it?
- 60.2615 What must I do if I plan to permanently close my CISWI unit and not restart it?

**Model Rule—Waste Management Plan**

- 60.2620 What is a waste management plan?
- 60.2625 When must I submit my waste management plan?
- 60.2630 What should I include in my waste management plan?

**Model Rule—Operator Training and Qualification**

- 60.2635 What are the operator training and qualification requirements?

- 60.2640 When must the operator training course be completed?
- 60.2645 How do I obtain my operator qualification?
- 60.2650 How do I maintain my operator qualification?
- 60.2655 How do I renew my lapsed operator qualification?
- 60.2660 What site-specific documentation is required?
- 60.2665 What if all the qualified operators are temporarily not accessible?

**Model Rule—Emission Limitations and Operating Limits**

- 60.2670 What emission limitations must I meet and by when?
- 60.2675 What operating limits must I meet and by when?
- 60.2680 What if I do not use a wet scrubber to comply with the emission limitations?
- 60.2685 What happens during periods of startup, shutdown, and malfunction?

**Model Rule—Performance Testing**

- 60.2690 How do I conduct the initial and annual performance test?
- 60.2695 How are the performance test data used?

**Model Rule—Initial Compliance Requirements**

- 60.2700 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?
- 60.2705 By what date must I conduct the initial performance test?

**Model Rule—Continuous Compliance Requirements**

- 60.2710 How do I demonstrate continuous compliance with the emission limitations and the operating limits?
- 60.2715 By what date must I conduct the annual performance test?

- 60.2720 May I conduct performance testing less often?
- 60.2725 May I conduct a repeat performance test to establish new operating limits?

#### **Model Rule—Monitoring**

- 60.2730 What monitoring equipment must I install and what parameters must I monitor?
- 60.2735 Is there a minimum amount of monitoring data I must obtain?

#### **Model Rule—Recordkeeping and Reporting**

- 60.2740 What records must I keep?
- 60.2745 Where and in what format must I keep my records?
- 60.2750 What reports must I submit?
- 60.2755 When must I submit my waste management plan?
- 60.2760 What information must I submit following my initial performance test?
- 60.2765 When must I submit my annual report?
- 60.2770 What information must I include in my annual report?
- 60.2775 What else must I report if I have a deviation from the operating limits or the emission limitations?
- 60.2780 What must I include in the deviation report?
- 60.2785 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?
- 60.2790 Are there any other notifications or reports that I must submit?
- 60.2795 In what form can I submit my reports?
- 60.2800 Can reporting dates be changed?

#### **Model Rule—Title V Operating Permits**

- 60.2805 Am I required to apply for and obtain a title V operating permit for my unit?

#### **Model Rule—Air Curtain Incinerators**

- 60.2810 What is an air curtain incinerator?
- 60.2815 What are my requirements for meeting increments of progress and achieving final compliance?
- 60.2820 When must I complete each increment of progress?
- 60.2825 What must I include in the notifications of achievement of increments of progress?
- 60.2830 When must I submit the notifications of achievement of increments of progress?
- 60.2835 What if I do not meet an increment of progress?
- 60.2840 How do I comply with the increment of progress for submittal of a control plan?
- 60.2845 How do I comply with the increment of progress for achieving final compliance?
- 60.2850 What must I do if I close my air curtain incinerator and then restart it?
- 60.2855 What must I do if I plan to permanently close my air curtain incinerator and not restart it?
- 60.2860 What are the emission limitations for air curtain incinerators?
- 60.2865 How must I monitor opacity for air curtain incinerators?

- 60.2870 What are the recordkeeping and reporting requirements for air curtain incinerators?

#### **Model Rule—Definitions**

- 60.2875 What definitions must I know?

#### **Tables to Subpart DDDD**

- Table 1 to Subpart DDDD—Model Rule—Increments of Progress and Compliance Schedules
- Table 2 to Subpart DDDD—Model Rule—Emission Limitations
- Table 3 to Subpart DDDD—Model Rule—Operating Limits for Wet Scrubbers
- Table 4 to Subpart DDDD—Model Rule—Toxic Equivalency Factors
- Table 5 to Subpart DDDD—Model Rule—Summary of Reporting Requirements

#### **Introduction**

##### **§ 60.2500 What is the purpose of this subpart?**

This subpart establishes emission guidelines and compliance schedules for the control of emissions from commercial and industrial solid waste incineration (CISWI) units. The pollutants addressed by these emission guidelines are listed in Table 2 of this subpart. These emission guidelines are developed in accordance with sections 111(d) and 129 of the Clean Air Act and subpart B of this part.

##### **§ 60.2505 Am I affected by this subpart?**

(a) If you are the Administrator of an air quality program in a State or United States protectorate with one or more existing CISWI units that commenced construction on or before November 30, 1999, you must submit a State plan to U.S. Environmental Protection Agency (EPA) that implements the emission guidelines contained in this subpart.

(b) You must submit the State plan to EPA by December 3, 2001.

##### **§ 60.2510 Is a State plan required for all States?**

No. You are not required to submit a State plan if there are no existing CISWI units in your State, and you submit a negative declaration letter in place of the State plan.

##### **§ 60.2515 What must I include in my State plan?**

(a) You must include the nine items described in paragraphs (a)(1) through (9) of this section in your State plan.

(1) Inventory of affected CISWI units, including those that have ceased operation but have not been dismantled.

(2) Inventory of emissions from affected CISWI units in your State.

(3) Compliance schedules for each affected CISWI unit.

(4) Emission limitations, operator training and qualification requirements, a waste management plan, and

operating limits for affected CISWI units that are at least as protective as the emission guidelines contained in this subpart.

(5) Performance testing, recordkeeping, and reporting requirements.

(6) Certification that the hearing on the State plan was held, a list of witnesses and their organizational affiliations, if any, appearing at the hearing, and a brief written summary of each presentation or written submission.

(7) Provision for State progress reports to EPA.

(8) Identification of enforceable State mechanisms that you selected for implementing the emission guidelines of this subpart.

(9) Demonstration of your State's legal authority to carry out the sections 111(d) and 129 State plan.

(b) Your State plan may deviate from the format and content of the emission guidelines contained in this subpart. However, if your State plan does deviate in content, you must demonstrate that your State plan is at least as protective as the emission guidelines contained in this subpart. Your State plan must address regulatory applicability, increments of progress for retrofit, operator training and qualification, a waste management plan, emission limitations, performance testing, operating limits, monitoring, recordkeeping and reporting, and air curtain incinerator requirements.

(c) You must follow the requirements of subpart B of this part (Adoption and Submittal of State Plans for Designated Facilities) in your State plan.

##### **§ 60.2520 Is there an approval process for my State plan?**

Yes. The EPA will review your State plan according to § 60.27.

##### **§ 60.2525 What if my State plan is not approvable?**

If you do not submit an approvable State plan (or a negative declaration letter) by December 2, 2002, EPA will develop a Federal plan according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of CISWI units not covered by an approved State plan must comply with the Federal plan. The Federal plan is an interim action and will be automatically withdrawn when your State plan is approved.

##### **§ 60.2530 Is there an approval process for a negative declaration letter?**

No. The EPA has no formal review process for negative declaration letters. Once your negative declaration letter has been received, EPA will place a

copy in the public docket and publish a notice in the **Federal Register**. If, at a later date, an existing CISWI unit is found in your State, the Federal plan implementing the emission guidelines contained in this subpart would automatically apply to that CISWI unit until your State plan is approved.

**§ 60.2535 What compliance schedule must I include in my State plan?**

(a) Your State plan must include compliance schedules that require CISWI units to achieve final compliance as expeditiously as practicable after approval of the State plan but not later than the earlier of the two dates specified in paragraphs (a)(1) and (2) of this section.

(1) December 1, 2005.

(2) Three years after the effective date of State plan approval.

(b) For compliance schedules more than 1 year following the effective date of State plan approval, State plans must include dates for enforceable increments of progress as specified in § 60.2580.

**§ 60.2540 Are there any State plan requirements for this subpart that apply instead of the requirements specified in subpart B?**

Yes. Subpart B establishes general requirements for developing and processing section 111(d) plans. This subpart applies instead of the requirements in subpart B of this part for paragraphs (a) and (b) of this section:

(a) State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all CISWI units to comply by December 1, 2005 or 3 years after the effective date of State plan approval, whichever is sooner. This applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in § 60.24(f).

(b) State plans developed to implement this subpart are required to include two increments of progress for the affected CISWI units. These two minimum increments are the final control plan submittal date and final compliance date in § 60.21(h)(1) and (5). This applies instead of the requirement of § 60.24(e)(1) that would require a State plan to include all five increments of progress for all CISWI units.

**§ 60.2545 Does this subpart directly affect CISWI unit owners and operators in my State?**

(a) No. This subpart does not directly affect CISWI unit owners and operators in your State. However, CISWI unit owners and operators must comply with the State plan you develop to

implement the emission guidelines contained in this subpart. States may choose to incorporate the model rule text directly in their State plan.

(b) If you do not submit an approvable plan to implement and enforce the guidelines contained in this subpart by December 2, 2002, the EPA will implement and enforce a Federal plan, as provided in § 60.2525, to ensure that each unit within your State reaches compliance with all the provisions of this subpart by December 1, 2005.

**Applicability of State Plans**

**§ 60.2550 What CISWI units must I address in my State plan?**

(a) Your State plan must address incineration units that meet all three criteria described in paragraphs (a)(1) through (3) of this section.

(1) Incineration units in your State that commenced construction on or before November 30, 1999.

(2) Incineration units that meet the definition of a CISWI unit as defined in § 60.2875.

(3) Incineration units not exempt under § 60.2555.

(b) If the owner or operator of a CISWI unit makes changes that meet the definition of modification or reconstruction on or after June 1, 2001, the CISWI unit becomes subject to subpart CCCC of this part and the State plan no longer applies to that unit.

(c) If the owner or operator of a CISWI unit makes physical or operational changes to an existing CISWI unit primarily to comply with your State plan, subpart CCCC of this part does not apply to that unit. Such changes do not qualify as modifications or reconstructions under subpart CCCC of this part.

**§ 60.2555 What combustion units are exempt from my State plan?**

This subpart exempts fifteen types of units described in paragraphs (a) through (o) of this section.

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 60.2875 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and

the weight of all other fuels and wastes burned in the unit.

(b) *Agricultural waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of agricultural wastes as defined in § 60.2875 are not subject to this subpart if you meet the two requirements specified in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of agricultural waste burned, and the weight of all other fuels and wastes burned in the unit.

(c) *Municipal waste combustion units.* Incineration units that meet either of the two criteria specified in paragraphs (c)(1) or (2) of this section.

(1) Are regulated under subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors that are Constructed on or Before September 20, 1994); subpart AAAA of this part (Standards of Performance for New Stationary Sources: Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units).

(2) Burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in subpart Ea, subpart Eb, subpart AAAA, and subpart BBBB, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) Notify the Administrator that the unit meets these criteria.

(ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ca of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements

specified in paragraphs (e)(1) through (3) of this section.

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(3) You notify the Administrator that the unit meets all of these criteria.

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(1) through (3) of this section.

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You notify the Administrator that the unit meets all of these criteria.

(g) *Hazardous waste combustion units.* Units that meet either of the two criteria specified in paragraph (g)(1) or (2) of this section.

(1) Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(2) Units regulated under subpart EEE of 40 CFR part 63 (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2810 through 60.2870).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

(j) *Cyclonic barrel burners.* (See § 60.2875)

(k) *Rack, part, and drum reclamation units.* (See § 60.2875)

(l) *Cement kilns.* Kilns regulated under subpart LLL of part 63 of this chapter (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry).

(m) *Sewage sludge incinerators.* Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Chemical recovery units.* Combustion units burning materials to

recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. The seven types of units described in paragraphs (n)(1) through (7) of this section are considered chemical recovery units.

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid.

(3) Units burning only wood or coal feedstock for the production of charcoal.

(4) Units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

(7) Units burning only photographic film to recover silver.

(o) *Laboratory analysis units.* Units that burn samples of materials for the purpose of chemical or physical analysis.

#### **§ 60.2558 What if a chemical recovery unit is not listed in § 60.2555(n)?**

(a) If a chemical recovery unit is not listed in § 60.2555(n), the owner or operator of the unit can petition the Administrator to add the unit to the list. The petition must contain the six items in paragraphs (a)(1) through (6) of this section.

(1) A description of the source of the materials being burned.

(2) A description of the composition of the materials being burned, highlighting the chemical constituents in these materials that are recovered.

(3) A description (including a process flow diagram) of the process in which the materials are burned, highlighting the type, design, and operation of the equipment used in this process.

(4) A description (including a process flow diagram) of the chemical constituent recovery process, highlighting the type, design, and operation of the equipment used in this process.

(5) A description of the commercial markets for the recovered chemical constituents and their use.

(6) The composition of the recovered chemical constituents and the

composition of these chemical constituents as they are bought and sold in commercial markets.

(b) Until the Administrator approves the petition, the incineration unit is covered by this subpart.

(c) If a petition is approved, the Administrator will amend § 60.2555(n) to add the unit to the list of chemical recovery units.

#### **Use of Model Rule**

##### **§ 60.2560 What is the "model rule" in this subpart?**

(a) The model rule is the portion of these emission guidelines (§§ 60.2575 through 60.2875) that addresses the regulatory requirements applicable to CISWI units. The model rule provides these requirements in regulation format. You must develop a State plan that is at least as protective as the model rule. You may use the model rule language as part of your State plan. Alternative language may be used in your State plan if you demonstrate that the alternative language is at least as protective as the model rule contained in this subpart.

(b) In the model rule of §§ 60.2575 to 60.2875, "you" means the owner or operator of a CISWI unit.

##### **§ 60.2565 How does the model rule relate to the required elements of my State plan?**

Use the model rule to satisfy the State plan requirements specified in § 60.2515(a)(4) and (5).

##### **§ 60.2570 What are the principal components of the model rule?**

The model rule contains the eleven major components listed in paragraphs (a) through (k) of this section.

(a) Increments of progress toward compliance.

(b) Waste management plan.

(c) Operator training and qualification.

(d) Emission limitations and operating limits.

(e) Performance testing.

(f) Initial compliance requirements.

(g) Continuous compliance requirements.

(h) Monitoring.

(i) Recordkeeping and reporting.

(j) Definitions.

(k) Tables.

#### **Model Rule—Increments of Progress**

##### **§ 60.2575 What are my requirements for meeting increments of progress and achieving final compliance?**

If you plan to achieve compliance more than 1 year following the effective date of State plan approval, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section.

- (a) Submit a final control plan.
- (b) Achieve final compliance.

**§ 60.2580 When must I complete each increment of progress?**

Table 1 of this subpart specifies compliance dates for each of the increments of progress.

**§ 60.2585 What must I include in the notifications of achievement of increments of progress?**

Your notification of achievement of increments of progress must include the three items specified in paragraphs (a) through (c) of this section.

- (a) Notification that the increment of progress has been achieved.
- (b) Any items required to be submitted with each increment of progress.
- (c) Signature of the owner or operator of the CISWI unit.

**§ 60.2590 When must I submit the notifications of achievement of increments of progress?**

Notifications for achieving increments of progress must be postmarked no later than 10 business days after the compliance date for the increment.

**§ 60.2595 What if I do not meet an increment of progress?**

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment of progress in Table 1 of this subpart. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

**§ 60.2600 How do I comply with the increment of progress for submittal of a control plan?**

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section.

- (a) Submit the final control plan that includes the five items described in paragraphs (a)(1) through (5) of this section.

(1) A description of the devices for air pollution control and process changes that you will use to comply with the emission limitations and other requirements of this subpart.

(2) The type(s) of waste to be burned.

(3) The maximum design waste burning capacity.

(4) The anticipated maximum charge rate.

(5) If applicable, the petition for site-specific operating limits under § 60.2680.

- (b) Maintain an onsite copy of the final control plan.

**§ 60.2605 How do I comply with the increment of progress for achieving final compliance?**

For the final compliance increment of progress, you must complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected CISWI unit is brought online, all necessary process changes and air pollution control devices would operate as designed.

**§ 60.2610 What must I do if I close my CISWI unit and then restart it?**

(a) If you close your CISWI unit but will restart it prior to the final compliance date in your State plan, you must meet the increments of progress specified in § 60.2575.

(b) If you close your CISWI unit but will restart it after your final compliance date, you must complete emission control retrofits and meet the emission limitations and operating limits on the date your unit restarts operation.

**§ 60.2615 What must I do if I plan to permanently close my CISWI unit and not restart it?**

If you plan to close your CISWI unit rather than comply with the State plan, submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

**Model Rule—Waste Management Plan**

**§ 60.2620 What is a waste management plan?**

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

**§ 60.2625 When must I submit my waste management plan?**

You must submit a waste management plan no later than the date specified in Table 1 of this subpart for submittal of the final control plan.

**§ 60.2630 What should I include in my waste management plan?**

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures, and the source must implement those measures considered practical and feasible, based

on the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

**Model Rule—Operator Training and Qualification**

**§ 60.2635 What are the operator training and qualification requirements?**

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 60.2665.

(b) Operator training and qualification must be obtained through a State-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section.

(1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (if applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Actions to correct malfunctions or conditions that may lead to malfunction.

(viii) Bottom and fly ash characteristics and handling procedures.

(ix) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(x) Pollution prevention.

(xi) Waste management practices.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that can serve as

reference material following completion of the course.

**§ 60.2640 When must the operator training course be completed?**

The operator training course must be completed by the later of the three dates specified in paragraphs (a) through (c) of this section.

(a) The final compliance date (Increment 2).

(b) Six months after CISWI unit startup.

(c) Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

**§ 60.2645 How do I obtain my operator qualification?**

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 60.2635(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 60.2635(c)(2).

**§ 60.2650 How do I maintain my operator qualification?**

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.

(c) Inspection and maintenance.

(d) Responses to malfunctions or conditions that may lead to malfunction.

(e) Discussion of operating problems encountered by attendees.

**§ 60.2655 How do I renew my lapsed operator qualification?**

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 60.2650.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 60.2645(a).

**§ 60.2660 What site-specific documentation is required?**

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the

training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

(1) Summary of the applicable standards under this subpart.

(2) Procedures for receiving, handling, and charging waste.

(3) Incinerator startup, shutdown, and malfunction procedures.

(4) Procedures for maintaining proper combustion air supply levels.

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.

(6) Monitoring procedures for demonstrating compliance with the incinerator operating limits.

(7) Reporting and recordkeeping procedures.

(8) The waste management plan required under §§ 60.2620 through 60.2630.

(9) Procedures for handling ash.

(10) A list of the wastes burned during the performance test.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator.

(1) The initial review of the information listed in paragraph (a) of this section must be conducted by the later of the three dates specified in paragraphs (b)(1)(i) through (iii) of this section.

(i) The final compliance date (Increment 2).

(ii) Six months after CISWI unit startup.

(iii) Six months after being assigned to operate the CISWI unit.

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted no later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section.

(1) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews.

(2) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

**§ 60.2665 What if all the qualified operators are temporarily not accessible?**

If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 60.2660(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 60.2770.

(b) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section.

(i) A qualified operator is accessible as required under § 60.2635(a).

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

## Model Rule—Emission Limitations and Operating Limits

### § 60.2670 What emission limitations must I meet and by when?

You must meet the emission limitations specified in Table 2 of this subpart on the date the initial performance test is required or completed (whichever is earlier).

### § 60.2675 What operating limits must I meet and by when?

(a) If you use a wet scrubber to comply with the emission limitations, you must establish operating limits for four operating parameters (as specified in Table 3 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test.

(1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii), as appropriate.

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet scrubber, which is calculated as 90 percent of the average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as 90 percent of the average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquor flow rate, which is calculated as 90 percent of the average liquor flow rate at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as 90 percent of the average liquor pH at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

(b) You must meet the operating limits established during the initial performance test on the date the initial

performance test is required or completed (whichever is earlier).

(c) If you use a fabric filter to comply with the emission limitations, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

### § 60.2680 What if I do not use a wet scrubber to comply with the emission limitations?

If you use an air pollution control device other than a wet scrubber, or limit emissions in some other manner, to comply with the emission limitations under § 60.2670, you must petition the Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. You must not conduct the initial performance test until after the petition has been approved by the Administrator. Your petition must include the five items listed in paragraphs (a) through (e) of this section.

(a) Identification of the specific parameters you propose to use as additional operating limits.

(b) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

(c) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters.

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

(e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

### § 60.2685 What happens during periods of startup, shutdown, and malfunction?

(a) The emission limitations and operating limits apply at all times

except during CISWI unit startups, shutdowns, or malfunctions.

(b) Each malfunction must last no longer than 3 hours.

## Model Rule—Performance Testing

### § 60.2690 How do I conduct the initial and annual performance test?

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in § 60.2740(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in Table 2 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using Equation 1 of this section:

$$C_{\text{adj}} = C_{\text{meas}} (20.9 - 7) / (20.9 - \%O_2) \quad (\text{Eq. 1})$$

Where:

$C_{\text{adj}}$  = pollutant concentration adjusted to 7 percent oxygen;

$C_{\text{meas}}$  = pollutant concentration measured on a dry basis;

$(20.9 - 7)$  = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$  = oxygen concentration measured on a dry basis, percent.

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (3) of this section.

(1) Measure the concentration of each dioxin/furan tetra- through octa-congener emitted using EPA Method 23.

(2) For each dioxin/furan congener measured in accordance with paragraph (g)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 4 of this subpart.

(3) Sum the products calculated in accordance with paragraph (g)(2) of this section to obtain the total concentration



of dioxins/furans emitted in terms of toxic equivalency.

**§ 60.2695 How are the performance test data used?**

You use results of performance tests to demonstrate compliance with the emission limitations in Table 2 of this subpart.

**Model Rule—Initial Compliance Requirements**

**§ 60.2700 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?**

You must conduct an initial performance test, as required under § 60.8, to determine compliance with the emission limitations in Table 2 of this subpart and to establish operating limits using the procedure in § 60.2675 or § 60.2680. The initial performance test must be conducted using the test methods listed in Table 2 of this subpart and the procedures in § 60.2690.

**§ 60.2705 By what date must I conduct the initial performance test?**

The initial performance test must be conducted no later than 180 days after your final compliance date. Your final compliance date is specified in Table 1 of this subpart.

**Model Rule—Continuous Compliance Requirements**

**§ 60.2710 How do I demonstrate continuous compliance with the emission limitations and the operating limits?**

(a) You must conduct an annual performance test for particulate matter, hydrogen chloride, and opacity for each CISWI unit as required under § 60.8 to determine compliance with the emission limitations. The annual performance test must be conducted using the test methods listed in Table 2 of this subpart and the procedures in § 60.2690.

(b) You must continuously monitor the operating parameters specified in § 60.2675 or established under § 60.2680. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour rolling average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under § 60.2680. Operating limits do not apply during performance tests.

(c) You must only burn the same types of waste used to establish operating limits during the performance test.

**§ 60.2715 By what date must I conduct the annual performance test?**

You must conduct annual performance tests for particulate matter, hydrogen chloride, and opacity within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

**§ 60.2720 May I conduct performance testing less often?**

(a) You can test less often for a given pollutant if you have test data for at least 3 years, and all performance tests for the pollutant (particulate matter, hydrogen chloride, or opacity) over 3 consecutive years show that you comply with the emission limitation. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 36 months following the previous performance test.

(b) If your CISWI unit continues to meet the emission limitation for particulate matter, hydrogen chloride, or opacity, you may choose to conduct performance tests for these pollutants every third year, but each test must be within 36 months of the previous performance test.

(c) If a performance test shows a deviation from an emission limitation for particulate matter, hydrogen chloride, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 3-year period show compliance.

**§ 60.2725 May I conduct a repeat performance test to establish new operating limits?**

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

**Model Rule—Monitoring**

**§ 60.2730 What monitoring equipment must I install and what parameters must I monitor?**

(a) If you are using a wet scrubber to comply with the emission limitation under § 60.2670, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in Table 3 of this subpart. These

devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in Table 3 of this subpart at all times except as specified in § 60.2735(a).

(b) If you use a fabric filter to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If you are using something other than a wet scrubber to comply with the emission limitations under § 60.2670, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 60.2680.

**§ 60.2735 Is there a minimum amount of monitoring data I must obtain?**

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or quality control activities (including, as

applicable, calibration checks and required zero and span adjustments of the monitoring system), you must conduct all monitoring at all times the CISWI unit is operating.

(b) Do not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing compliance with the operating limits.

### **Model Rule—Recordkeeping and Reporting**

#### **§ 60.2740 What records must I keep?**

You must maintain the 13 items (as applicable) as specified in paragraphs (a) through (m) of this section for a period of at least 5 years:

- (a) Calendar date of each record.
- (b) Records of the data described in paragraphs (b)(1) through (6) of this section:
  - (1) The CISWI unit charge dates, times, weights, and hourly charge rates.
  - (2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.
  - (3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable.
  - (4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.
  - (5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under § 60.2680, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.
  - (6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 60.2675(c).
- (c) Identification of calendar dates and times for which monitoring systems used to monitor operating limits were inoperative, inactive, malfunctioning, or out of control (except for downtime associated with zero and span and other routine calibration checks). Identify the operating parameters not measured, the duration, reasons for not obtaining the data, and a description of corrective actions taken.

(d) Identification of calendar dates, times, and durations of malfunctions, and a description of the malfunction and the corrective action taken.

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in Table 3 of this subpart or a deviation from other operating limits established under § 60.2680 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations.

(g) Records showing the names of CISWI unit operators who have completed review of the information in § 60.2660(a) as required by § 60.2660(b), including the date of the initial review and all subsequent annual reviews.

(h) Records showing the names of the CISWI operators who have completed the operator training requirements under § 60.2635, met the criteria for qualification under § 60.2645, and maintained or renewed their qualification under § 60.2650 or § 60.2655. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(i) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(j) Records of calibration of any monitoring devices as required under § 60.2730.

(k) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.

(l) The information listed in § 60.2660(a).

(m) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).

#### **§ 60.2745 Where and in what format must I keep my records?**

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

#### **§ 60.2750 What reports must I submit?**

See Table 5 of this subpart for a summary of the reporting requirements.

#### **§ 60.2755 When must I submit my waste management plan?**

You must submit the waste management plan no later than the date specified in Table 1 of this subpart for submittal of the final control plan.

#### **§ 60.2760 What information must I submit following my initial performance test?**

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager.

(a) The complete test report for the initial performance test results obtained under § 60.2700, as applicable.

(b) The values for the site-specific operating limits established in § 60.2675 or § 60.2680.

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 60.2730(b).

#### **§ 60.2765 When must I submit my annual report?**

You must submit an annual report no later than 12 months following the submission of the information in § 60.2760. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

#### **§ 60.2770 What information must I include in my annual report?**

The annual report required under § 60.2765 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 60.2775, 60.2780, and 60.2785.

(a) Company name and address.

(b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(c) Date of report and beginning and ending dates of the reporting period.

(d) The values for the operating limits established pursuant to § 60.2675 or § 60.2680.

(e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the operating limits

was inoperative, inactive, malfunctioning or out of control.

(f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 60.2740(b)(6) and (c) through (e) for the calendar year being reported.

(h) If a performance test was conducted during the reporting period, the results of that test.

(i) If you met the requirements of § 60.2720(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 60.2720(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks.

**§ 60.2775 What else must I report if I have a deviation from the operating limits or the emission limitations?**

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

**§ 60.2780 What must I include in the deviation report?**

In each report required under § 60.2775, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section.

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements.

(b) The averaged and recorded data for those dates.

(c) Duration and causes of each deviation from the emission limitations or operating limits and your corrective actions.

(d) A copy of the operating limit monitoring data during each deviation

and any test report that documents the emission levels.

(e) The dates, times, number, duration, and causes for monitoring downtime incidents (other than downtime associated with zero, span, and other routine calibration checks).

(f) Whether each deviation occurred during a period of startup, shutdown, or malfunction, or during another period.

**§ 60.2785 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?**

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section.

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section.

(i) A statement of what caused the deviation.

(ii) A description of what you are doing to ensure that a qualified operator is accessible.

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section.

(i) A description of what you are doing to ensure that a qualified operator is accessible.

(ii) The date when you anticipate that a qualified operator will be accessible.

(iii) Request approval from the Administrator to continue operation of the CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 60.2665(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

**§ 60.2790 Are there any other notifications or reports that I must submit?**

Yes. You must submit notifications as provided by § 60.7.

**§ 60.2795 In what form can I submit my reports?**

Submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

**§ 60.2800 Can reporting dates be changed?**

If the Administrator agrees, you may change the semiannual or annual reporting dates. See § 60.19(c) for procedures to seek approval to change your reporting date.

**Model Rule—Title V Operating Permits**

**§ 60.2805 Am I required to apply for and obtain a title V operating permit for my unit?**

Yes. Each CISWI unit must operate pursuant to a permit issued under section 129(e) and title V of the Clean Air Act by the later of the two dates in paragraphs (a) and (b) of this section.

(a) Thirty-six months after December 1, 2000.

(b) The effective date of the title V permit program to which your unit is subject. If your unit is subject to title V as a result of some triggering requirement(s) other than this subpart (for example, being a major source), then your unit may be required to apply for and obtain a title V permit prior to the deadlines noted above. If more than one requirement triggers the requirement to apply for a title V permit, the 12-month timeframe for filing a title V application is triggered by the requirement which first causes the source to be subject to title V.

**Model Rule—Air Curtain Incinerators**

**§ 60.2810 What is an air curtain incinerator?**

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2810 through 60.2870).

(1) 100 percent wood waste.

(2) 100 percent clean lumber.

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

**§ 60.2815 What are my requirements for meeting increments of progress and achieving final compliance?**

If you plan to achieve compliance more than 1 year following the effective date of State plan approval, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section.

(a) Submit a final control plan.

(b) Achieve final compliance.

**§ 60.2820 When must I complete each increment of progress?**

Table 1 of this subpart specifies compliance dates for each of the increments of progress.

**§ 60.2825 What must I include in the notifications of achievement of increments of progress?**

Your notification of achievement of increments of progress must include the three items described in paragraphs (a) through (c) of this section.

(a) Notification that the increment of progress has been achieved.

(b) Any items required to be submitted with each increment of progress (see § 60.2840).

(c) Signature of the owner or operator of the incinerator.

**§ 60.2830 When must I submit the notifications of achievement of increments of progress?**

Notifications for achieving increments of progress must be postmarked no later than 10 business days after the compliance date for the increment.

**§ 60.2835 What if I do not meet an increment of progress?**

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the date for that increment of progress in Table 1 of this subpart. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

**§ 60.2840 How do I comply with the increment of progress for submittal of a control plan?**

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section.

(a) Submit the final control plan, including a description of any devices for air pollution control and any process changes that you will use to comply with the emission limitations and other requirements of this subpart.

(b) Maintain an onsite copy of the final control plan.

**§ 60.2845 How do I comply with the increment of progress for achieving final compliance?**

For the final compliance increment of progress, you must complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed.

**§ 60.2850 What must I do if I close my air curtain incinerator and then restart it?**

(a) If you close your incinerator but will reopen it prior to the final compliance date in your State plan, you must meet the increments of progress specified in § 60.2815.

(b) If you close your incinerator but will restart it after your final compliance date, you must complete emission control retrofits and meet the emission limitations on the date your incinerator restarts operation.

**§ 60.2855 What must I do if I plan to permanently close my air curtain incinerator and not restart it?**

If you plan to close your incinerator rather than comply with the State plan, submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

**§ 60.2860 What are the emission limitations for air curtain incinerators?**

(a) After the date the initial stack test is required or completed (whichever is earlier), you must meet the limitations in paragraphs (a)(1) and (2) of this section.

(1) The opacity limitation is 10 percent (6-minute average), except as described in paragraph (a)(2) of this section.

(2) The opacity limitation is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times, and each malfunction must not exceed 3 hours.

**§ 60.2865 How must I monitor opacity for air curtain incinerators?**

(a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.

(b) Conduct an initial test for opacity as specified in § 60.8 no later than 180 days after your final compliance date.

(c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

**§ 60.2870 What are the recordkeeping and reporting requirements for air curtain incinerators?**

(a) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.

(b) Make all records available for submittal to the Administrator or for an inspector's onsite review.

(c) Submit an initial report no later than 60 days following the initial

opacity test that includes the information specified in paragraphs (c) (1) and (2) of this section.

(1) The types of materials you plan to combust in your air curtain incinerator.

(2) The results (each 6-minute average) of the initial opacity tests.

(d) Submit annual opacity test results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of 5 years.

**Model Rule—Definitions****§ 60.2875 What definitions must I know?**

Terms used but not defined in this subpart are defined in the Clean Air Act and subparts A and B of this part.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or Administrator of a State Air Pollution Control Agency.

*Agricultural waste* means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

*Auxiliary fuel* means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

*Bag leak detection system* means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 consecutive days starting on January 1 and ending on December 31.

*Chemotherapeutic waste* means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

*Clean lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

*Commercial and industrial solid waste incineration (CISWI) unit* means any combustion device that combusts commercial and industrial waste, as defined in this subpart. The boundaries of a CISWI unit are defined as, but not limited to, the commercial or industrial solid waste fuel feed system, grate system, flue gas system, and bottom ash. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the commercial and industrial solid waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber.

(2) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. It includes all ash handling systems connected to the bottom ash handling system.

*Commercial and industrial waste* means solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

*Contained gaseous material* means gases that are in a container when that container is combusted.

*Cyclonic barrel burner* means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air.

*Deviation* means any instance in which an affected source subject to this

subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, operating limit, or operator qualification and accessibility requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Dioxins/furans* means tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Discard* means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

*Drum reclamation unit* means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

*Energy recovery* means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

*Low-level radioactive waste* means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

*Modification or modified CISWI unit* means a CISWI unit you have changed later than June 1, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not

including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

*Part reclamation unit* means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

*Particulate matter* means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of appendix A of this part.

*Pathological waste* means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

*Rack reclamation unit* means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

*Reconstruction* means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after June 1, 2001.

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

*Shutdown* means the period of time after all waste has been combusted in the primary chamber.

*Solid waste* means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community

activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2014). For purposes of this subpart and subpart CCCC, only, solid waste does not include the waste burned in the fifteen types of units described in § 60.2555.

*Standard conditions*, when referring to units of measure, means a temperature of 68°F (20°C) and a pressure of 1 atmosphere (101.3 kilopascals).

*Startup period* means the period of time between the activation of the system and the first charge to the unit.

*Wet scrubber* means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

*Wood waste* means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.

(2) Construction, renovation, or demolition wastes.

(3) Clean lumber.

TABLE 1 TO SUBPART DDDD—MODEL RULE—INCREMENTS OF PROGRESS AND COMPLIANCE SCHEDULES

Comply with these increments of progress	By these dates <sup>a</sup>
Increment 1—Submit final control plan .....	(Dates to be specified in State plan)
Increment 2—Final compliance .....	(Dates to be specified in State plan) <sup>b</sup>

<sup>a</sup> Site-specific schedules can be used at the discretion of the State.

<sup>b</sup> The date can be no later than 3 years after the effective date of State plan approval or December 1, 2005.

TABLE 2 TO SUBPART DDDD—MODEL RULE—EMISSION LIMITATIONS

For the air pollutant	You must meet this emission limitation <sup>a</sup>	Using this averaging time	And determining compliance using this method
Cadmium .....	0.004 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Carbon monoxide ....	157 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10, 10A, or 10B, of appendix A of this part)
Dioxins/furans (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 23 of appendix A of this part)
Hydrogen chloride ....	62 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 26A of appendix A of this part)
Lead .....	0.04 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Mercury .....	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of this part)
Opacity .....	10 percent .....	6-minute averages .....	Performance test (Method 9 of appendix A of this part)
Oxides of nitrogen ...	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Methods 7, 7A, 7C, 7D, or 7E of appendix A of this part)
Particulate matter .....	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of this part)
Sulfur dioxide .....	20 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c of appendix A of this part)

<sup>a</sup> All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

TABLE 3 TO SUBPART DDDD—MODEL RULE—OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate .....	Maximum charge rate.	Continuous .....	Every hour .....	Daily (batch units). 3-hour rolling (continuous and intermittent units) <sup>a</sup>
Pressure drop across the wet scrubber or amperage to wet scrubber.	Minimum pressure drop or amperage.	Continuous .....	Every 15 minutes .....	3-hour rolling <sup>a</sup>
Scrubber liquor flow rate.	Minimum flow rate ....	Continuous .....	Every 15 minutes .....	3-hour rolling <sup>a</sup>
Scrubber liquor pH ...	Minimum pH .....	Continuous .....	Every 15 minutes .....	3-hour rolling <sup>a</sup>

<sup>a</sup> Calculated each hour as the average of the previous 3 operating hours.

TABLE 4 TO SUBPART DDDD—MODEL RULE—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin .....	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin .....	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin .....	0.01
octachlorinated dibenzo-p-dioxin .....	0.001
2,3,7,8-tetrachlorinated dibenzofuran .....	0.1
2,3,4,7,8-pentachlorinated dibenzofuran .....	0.5
1,2,3,7,8-pentachlorinated dibenzofuran .....	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran .....	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran .....	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran .....	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran .....	0.01
octachlorinated dibenzofuran .....	0.001

TABLE 5 TO SUBPART DDDD—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS <sup>a</sup>

Report	Due date	Contents	Reference
Waste Management Plan.	No later than the date specified in table 1 for submittal of the final control plan.	<ul style="list-style-type: none"> <li>Waste management plan .....</li> </ul>	§ 60.2755.
Initial Test Report .....	No later than 60 days following the initial performance test.	<ul style="list-style-type: none"> <li>Complete test report for the initial performance test</li> <li>The values for the site-specific operating limits</li> <li>Installation of bag leak detection systems for fabric filters</li> </ul>	§ 60.2760.
Annual Report .....	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	<ul style="list-style-type: none"> <li>Name and address .....</li> <li>Statement and signature by responsible official</li> <li>Date of report</li> <li>Values for the operating limits</li> <li>If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period</li> <li>Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported</li> <li>Information for deviations or malfunctions recorded under § 60.2740(b)(6) and (c) through (e)</li> <li>If a performance test was conducted during the reporting period, the results of the test</li> <li>If a performance test was not conducted during the reporting period, a statement that the requirements of § 60.2155(a) or (b) were met</li> <li>Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks</li> </ul>	§§ 60.2765 and 60.2770.
Emission Limitation or Operating Limit Deviation Report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	<ul style="list-style-type: none"> <li>Dates and times of deviations .....</li> <li>Averaged and recorded data for these dates</li> <li>Duration and causes for each deviation and the corrective actions taken</li> <li>Copy of operating limit monitoring data and any test reports</li> <li>Dates, times, and causes for monitor downtime incidents</li> <li>Whether each deviation occurred during a period of startup, shutdown, or malfunction</li> </ul>	§§ 60.2775 and 60.2780.

TABLE 5 TO SUBPART DDDD—MODEL RULE—SUMMARY OF REPORTING REQUIREMENTS <sup>a</sup>—Continued

Report	Due date	Contents	Reference
Qualified Operator Deviation Notification.	Within 10 days of deviation .....	<ul style="list-style-type: none"> <li>• Statement of cause of deviation .....</li> <li>• Description of efforts to have an accessible qualified operator</li> <li>• The date a qualified operator will be accessible</li> </ul>	§ 60.2785(a)(1).
Qualified Operator Deviation Status Report.	Every 4 weeks following deviation .....	<ul style="list-style-type: none"> <li>• Description of efforts to have an accessible qualified operator</li> <li>• The date a qualified operator will be accessible</li> <li>• Request for approval to continue operation</li> </ul>	§ 60.2785(a)(2).
Qualified Operator Deviation Notification of Resumed Operation.	Prior to resuming operation .....	<ul style="list-style-type: none"> <li>• Notification that you are resuming operation</li> </ul>	§ 60.2785(b)

<sup>a</sup> This table is only a summary, see the referenced sections of the rule for the complete requirements.

[FR Doc. 00-29875 Filed 11-30-00; 8:45 am]

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# Federal Register

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**Wednesday,  
December 6, 2000**

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## **Part II**

## **Environmental Protection Agency**

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**40 CFR Part 60**

**New Source Performance Standards for  
New Small Municipal Waste Combustion  
Units; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 60**

[AD-FRL-6899-6]

RIN 2060-AI51

**New Source Performance Standards for New Small Municipal Waste Combustion Units****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** This action reestablishes new source performance standards (NSPS) for new small municipal waste combustion (MWC) units. The NSPS for small MWC units contain stringent emission limits for organics (dioxins/furans), metals (cadmium, lead, mercury, and particulate matter), and acid gases (hydrogen chloride, sulfur dioxide, and nitrogen oxides). Some of those pollutants can cause toxic effects such as eye, nose, throat, and skin irritation, and blood cell, heart, liver, and kidney damage. The NSPS for small MWC units were originally promulgated in December 1995, but were vacated by the U.S. Court of Appeals for the District of Columbia Circuit in March 1997. In response to the 1997 vacature, on August 30, 1999, EPA proposed to reestablish NSPS for small MWC units. The NSPS contained in this final rule

are equivalent to the 1995 NSPS for small MWC units.

**DATES:** *Effective date.* June 6, 2001.

The incorporation by reference of certain publications listed in this rule are approved by the Director of the Office of Federal Register as of June 6, 2001.

*Applicability Date.* The NSPS apply to small MWC units that commenced construction after August 30, 1999 and small MWC units that commenced reconstruction or modification after June 6, 2001.

**ADDRESSES:** Docket No. A-98-18 and associated Docket Nos. A-90-45 and A-89-08 contain supporting information for the NSPS. The dockets are available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, at EPA's Air and Radiation Docket and Information Center (Mail Code-6102), 401 M Street SW, Washington, DC 20460, or by calling (202) 260-7548. The dockets are located at the above address in Room M-1500, Waterside Mall (ground floor). A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Mr. Rick Copland at (919) 541-5265, Combustion Group, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, e-mail: copland.rick@epa.gov.

**SUPPLEMENTARY INFORMATION:** Public Comments. The NSPS and companion

emission guidelines for small MWC units were proposed on August 30, 1999 (64 FR 47276), and 48 comment letters were received on the proposals. Verbal comments were also received at the October 5, 1999 public hearing. The comment letters and a transcript of the public hearing are available in Docket No. A-98-18. A summary of and responses to the public comments are contained in "Small Municipal Waste Combustors: Background Information Document for New Source Performance Standards and Emission Guidelines-Public Comments and Responses (EPA-453/R-00-001)." In response to the public comments, EPA adjusted the final NSPS where appropriate. A copy of the background information document is located in Docket No. A-98-18.

**World Wide Web**

Electronic versions of this action, the regulatory text, and other background information, including the response to comments document, are available at the Technology Transfer Network Web site (TTN Web) that EPA has established for the NSPS for small MWC units: "http://www.epa.gov/ttn/uatw/129/mwc/rimwc2.html." For assistance in downloading files, call the EPA's TTN Web Help Line at (919) 541-5384.

**Regulated Entities**

The NSPS will affect the following categories of sources:

Category	NAICS codes	SIC codes	Examples of regulated entities
Industry, Federal government, and State/local/tribal governments.	562213 92411	4953 9511	Solid waste combustors or incinerators at waste-to-energy facilities that generate electricity or steam from the combustion of garbage (typically municipal waste); and solid waste combustors or incinerators at facilities that combust garbage (typically municipal waste) and do not recover energy from the waste.

The above list is not intended to be exhaustive, but rather provides a guide regarding the entities EPA expects to regulate with the NSPS for small MWC units. Not all facilities classified under the NAICS and SIC codes are affected. Other types of entities not listed could also be affected. To determine whether your facility is regulated by the NSPS, carefully examine the applicability criteria in §§ 60.1010 through 60.1045 of the NSPS.

**Judicial Review**

Today's action of adopting a final rule for small MWC units constitutes final administrative action on the proposed NSPS for small MWC units. Under section 307(b)(1) of the Clean Air Act

(CAA), judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by February 5, 2001. Under section 307(d)(7)(B) of the CAA, only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's final action may not be challenged separately in any civil or criminal proceeding brought by EPA to enforce the requirements.

**Organization of This Document**

The following outline is provided to aid in locating information in this preamble.

- I. Background Information
- II. Summary of the NSPS
  - A. Sources Regulated by the NSPS
  - B. Pollutants Regulated by the NSPS
  - C. Format of the Emission Limits
  - D. Summary of the NSPS
- III. Changes to the NSPS
- IV. Impacts of the NSPS
  - A. Air Impacts
  - B. Cost and Economic Impacts
- V. Companion Rule for Existing Small MWC Units
- VI. Administrative Requirements
  - A. Executive Order 12866: Regulatory Planning and Review
  - B. Executive Order 13132: Federalism

- C. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments
  - D. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
  - E. Unfunded Mandates Reform Act
  - F. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*
  - G. Paperwork Reduction Act
  - H. National Technology Transfer and Advancement Act
  - I. Congressional Review Act
- Abbreviations and Acronyms Used in This Document
- ASME American Society of Mechanical Engineers
  - ASTM American Society for Testing and Materials
  - CFR Code of Federal Regulations
  - EIA Economic Impact Analysis
  - EPA U.S. Environmental Protection Agency
  - FR **Federal Register**
  - ICR Information Collection Request kg/year  
Kilograms per year
  - Mg/year Megagrams per year
  - MACT Maximum achievable control technology
  - MSW Municipal solid waste
  - MWC Municipal waste combustion
  - NAICS North American Industrial Classification System
  - NSPS New source performance standards
  - NTTAA National Technology Transfer and Advancement Act
  - OAQPS Office of Air Quality Planning and Standards
  - OMB Office of Management and Budget
  - OP Office of Policy
  - Pub. L. Public Law
  - RFA Regulatory Flexibility Act
  - SBREFA Small Business Regulatory Enforcement Fairness Act
  - SD/FF/CI Spray dryer/fabric filter/carbon injection
  - SIC Standard Industrial Classification
  - TTN Technology Transfer Network
  - UMRA Unfunded Mandates Reform Act
  - U.S. United States
  - U.S.C. United States Code

## I. Background Information

On December 19, 1995, EPA promulgated NSPS for large and small MWC units under 40 CFR part 60, subpart Eb. The NSPS covered new MWC units located at plants with an aggregate plant combustion capacity greater than 35 megagrams per day of municipal solid waste (MSW) (approximately 39 tons per day of MSW). The 1995 NSPS divided the MWC unit population into MWC units located at large MWC plants and MWC units located at small MWC plants. Plant size was based on the total aggregate capacity of all individual MWC units at the MWC plant.

Litigation followed the promulgation of the 1995 NSPS. In 1997, the U.S. Court of Appeals for the District of

Columbia Circuit ruled that EPA must develop regulations for small MWC units (units with an individual MWC capacity of 250 tons per day or less) separately from regulations for large MWC units (units with an individual MWC unit capacity greater than 250 tons per day), indicating that the 1995 NSPS were not consistent with section 129 of the CAA. The court directed EPA to revise the 1995 NSPS so that they applied only to large MWC units, and the court vacated the 1995 NSPS as they applied to small MWC units. In response to the court ruling, EPA amended the 1995 NSPS on August 25, 1997 so that they applied only to new large MWC units. Then, on August 30, 1999, EPA proposed NSPS for small MWC units with an individual unit capacity of 35 to 250 tons per day.

Today's final rule reestablishes NSPS for new small MWC units with capacities of 35 to 250 tons per day of MSW under 40 CFR part 60, subpart AAAA.

## II. Summary of the NSPS

The following summarizes the final NSPS for small MWC units, including identification of the subcategories used in the final NSPS. Overall, there are no significant changes in the final NSPS compared to the proposed NSPS. The following two subcategories are used in the NSPS for small MWC units: Class I units are small MWC units located at plants with aggregate plant capacities greater than 250 tons of MSW per day while Class II units are small MWC units located at plants with aggregate plant capacities less than or equal to 250 tons of MSW per day.

### A. Sources Regulated by the NSPS

Today's NSPS apply to each new MWC unit that has a design combustion capacity of 35 to 250 tons per day of MSW and commenced construction after August 30, 1999 or commenced modification or reconstruction after June 6, 2001. The NSPS for new, modified, or reconstructed MWC units will become effective on June 6, 2001. Small MWC units that commenced construction on or before August 30, 1999 are not covered under the NSPS (subpart AAAA). Those units will be subject to the emission guidelines for existing small MWC units (subpart BBBB) which are published separately in today's **Federal Register**.

### B. Pollutants Regulated by the NSPS

Section 129 of the CAA requires EPA to establish numerical emission limits for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, sulfur dioxide, hydrogen chloride,

nitrogen oxides, and carbon monoxide. Section 129 specifies that EPA may also:

\* \* \* promulgate numerical emission limitations or provide for the monitoring of post-combustion concentrations of surrogate substances, parameters, or periods of residence times in excess of stated temperatures with respect to pollutants other than those listed [above] \* \* \*

Therefore, in addition to the emission limits, EPA is establishing requirements for MWC unit operating load, flue gas temperature at the particulate matter control device inlet, and carbon feed rate as part of the good combustion practice requirements. The EPA is also establishing requirements for the control of fugitive ash emissions. All of those requirements were contained in the 1995 NSPS.

### C. Format of the Emission Limits

The format of the emission limits is identical to the format of the 1995 NSPS: emission limits based on pollutant concentration. Alternative percentage reduction requirements are provided for mercury, sulfur dioxide, and hydrogen chloride. Opacity and fugitive ash requirements are the same as the 1995 NSPS. In addition to controlling stack emissions, the NSPS incorporate good combustion practice requirements (*i.e.*, operator training, operator certification, and MWC unit operating requirements).

### D. Summary of the NSPS

A concise summary of the NSPS can be found in Tables 1 and 2 of subpart AAAA.

## III. Changes to the NSPS

There are no substantial changes in the final NSPS relative to the NSPS proposed in 1999. A summary of and responses to the public comments are contained in the background information document described earlier under "Public Comments." The final emission limits are consistent with the 1995 NSPS. Based on an evaluation of the best controlled units within the small MWC unit population, EPA has concluded that the performance of a spray dryer/fabric filter air pollution control system continues to represent the maximum achievable control technology (MACT) floor for new small MWC units.

## IV. Impacts of the NSPS

The following describes the impacts (*i.e.*, air, water, solid waste, energy, cost, and economic impacts) of the NSPS for new small MWC units. The impact analysis conducted to evaluate the 1995 NSPS still applies because the air pollution control requirements in the

final NSPS are the same as the 1995 NSPS. The 1995 analysis is available at 59 FR 48198. The discussion in this preamble focuses only on the air, cost, and economic impacts of the NSPS.

In the preamble for the 1995 NSPS, EPA determined that the water, solid waste, and energy impacts associated with the NSPS were not significant. Because the NSPS are the same as the 1995 NSPS, the water, solid waste, and energy impacts are the same and continue to be judged as not significant.

For further information on the impacts of the NSPS, refer to "Economic

Impact Analysis (EIA): Small Municipal Waste Combustion Units—Emission Guidelines and New Source Performance Standards," March 2000, EPA-452/R-00-001.

#### A. Air Impacts

As discussed in the EIA, approximately 90 small MWC units located at 41 plants are operating in the United States. Based on trends in small MWC unit construction over the past several years, EPA projects that about one new small MWC plant will be constructed each year. It is estimated

that most new plants with small MWC units will have, on average, two small MWC units onsite. The 5th year impacts are, therefore, based on the construction of 10 new small MWC units over a 5-year period.

Table 1 of this preamble presents the national air emissions reductions for new small MWC units that would result from full implementation of the NSPS in the 5th year compared to a baseline scenario without the NSPS.

TABLE 1.—NATIONAL AIR EMISSION IMPACTS OF THE NSPS FOR SMALL MWC UNITS

Pollutant	Air emissions reduction	Percent reduction <sup>a</sup>
Dioxins/Furans <sup>b</sup>	0.2 kg/year	99
Cadmium	169 kg/year	99
Lead	15 Mg/year	99
Mercury	386 kg/year	97
Particulate Matter	238 Mg/year	98
Sulfur Dioxide	189 Mg/year	83
Hydrogen Chloride	137 Mg/year	90
Nitrogen Oxides	(c)	(c)

<sup>a</sup> Percent national emissions reduction relative to national baseline emissions that would occur in the absence of the NSPS.

<sup>b</sup> Total mass of tetra-through octachlorinated dibenzo-p-dioxins through dibenzofurans.

<sup>c</sup> For Class I units, nitrogen oxides emissions reductions are expected to be approximately 40 percent. Class II units are not expected to have any reductions in nitrogen oxides emissions. Since the future distribution of new Class I and II units is unknown, mass reductions of nitrogen oxides are not presented.

#### B. Cost and Economic Impacts

To estimate the costs of the NSPS for new small MWC units, EPA has taken into account the various air pollution control equipment that would need to be installed at new small MWC plants to achieve the NSPS. The cost estimates presented here are the projected costs that a new MWC plant with two small MWC units would incur to comply with the NSPS. Those costs are based on new small MWC units installing spray dryer/fabric filter/carbon injection as the air pollution control device system. The EPA projects that the total annual cost (including annualized capital and operating costs) for a single MWC plant would be approximately \$1.6 million, and the total annualized cost of the NSPS would be \$8.1 million in the 5th year after promulgation. For more details on the cost and economic analysis, refer to the EIA.

#### V. Companion Rule for Existing Small MWC Units

A companion rule to establish emission guidelines for existing small MWC units is being published separately in today's **Federal Register**. The emission guidelines for existing small MWC units are contained in 40 CFR part 60, subpart BBBB.

#### VI. Administrative Requirements

##### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is "significant," and, therefore, subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to lead to a rule that may:

(1) Have an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, EPA has determined that

this final rule is not a "significant regulatory action" and, therefore, is not subject to OMB review. The EPA submitted the 1995 rulemaking package (which included requirements for new and existing large MWC units and requirements for new and existing small MWC units) to OMB for review (60 FR 65405, December 19, 1995) and OMB approved the rulemaking package for adoption. The NSPS promulgated today only apply to new small MWC units and are projected to have an impact of approximately \$8.1 million annually in the 5th year after promulgation of the NSPS.

##### B. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law, unless EPA consults with State and local officials early in the process of developing the proposed regulation.

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because the NSPS do not preclude States from adopting and implementing their own performance standards. Thus, the requirements of section 6 of the Executive Order do not apply to this final rule. Although section 6 of Executive Order 13132 does not apply to this final rule, EPA did consult with State and local officials in developing this final rule. A list of those consultations is provided in the preamble to the 1995 NSPS (60 FR 65405–65412, December 19, 1995).

#### *C. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments*

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide

meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's final rule does not significantly or uniquely affect the communities of Indian tribal governments. The EPA is not aware of any small MWC units located in Indian territory. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this final rule.

#### *D. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866. Further, it is based on technology performance and not on health and safety risks.

#### *E. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, or tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, or tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year. Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least

burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the NSPS do not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, or tribal governments, in the aggregate, or the private sector in any 1 year. The EIA shows that the total annual costs of the NSPS is about \$8.1 million per year in the 5th year after the rule is promulgated. Thus, today's NSPS are not subject to the requirements of sections 202 and 205 of the UMRA. Although the NSPS are not subject to UMRA, EPA prepared a cost-benefit analysis under section 202 of the UMRA for the 1995 NSPS. For a discussion of how EPA complied with the UMRA for the 1995 NSPS, including its extensive consultations with State and local governments, see the preamble to the 1995 NSPS. Because today's final NSPS are equivalent to the 1995 NSPS, no additional consultations were necessary.

#### *F. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.*

The RFA generally requires Federal agencies to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's final rule on small entities, a

small entity is defined as: (1) A small business in the regulated industry that has a gross annual revenue less than \$6 million; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has determined that this action will not have a significant economic impact on a substantial number of small entities. The EPA has determined that few small entities use MWC units for municipal solid waste disposal. The vast majority of small entities use municipal solid waste landfills for disposal. A small entity considering a new small MWC unit would have the opportunity to switch to an alternative municipal solid waste disposal method, such as municipal solid waste landfills, if the costs to comply with the NSPS were considered prohibitive. Thus, the number of small entities that will be significantly impacted by this final rule is not substantial.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA has tried to reduce the impact of this final rule on small entities by establishing different requirements for Class I and Class II MWC units and establishing provisions for less frequent testing for Class II MWC units. In addition, EPA involved representatives of small entities in the development of the NSPS.

#### *G. Paperwork Reduction Act*

The OMB has approved the information collection requirements in the NSPS under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and has assigned OMB control number 2060-0423; and ICR #1900.01.

The information will be used by EPA to identify new, modified, or reconstructed units subject to the NSPS and to ensure that those units undergo a preconstruction impact analysis. The information will also be used by EPA to ensure that the small MWC unit requirements are implemented properly and are complied with on a continuous basis. Records and reports enable EPA to identify small MWC units that might not be in compliance with the NSPS. Based on reported information, EPA will decide which small MWC units should be inspected and what records or processes should be inspected. Records

that owners and operators of small MWC units maintain indicate to EPA whether personnel are operating and maintaining control equipment properly.

The recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to EPA policies in 40 CFR part 2, subpart B, Confidentiality of Business Information.

For the information collection request (ICR), a 3-year impact period was analyzed. The NSPS are projected to affect six MWC units located at three MWC plants during the first 3 years immediately following promulgation. The estimated average annual burden to owners of new small MWC units for the first 3 years after promulgation of the NSPS would be approximately 8,600 person-hours annually at a total cost of \$219,000 for capital start-up costs and O&M costs per year to meet the monitoring, recordkeeping, and reporting requirements. The estimated average annualized burden to the government implementing the final NSPS would be approximately 500 hours during the first 3 years at a cost of \$21,000 (including travel expenses).

Burden means total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. That includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. The EPA is amending the table in 40 CFR part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the information collection requirements contained in this final rule.

#### *H. National Technology Transfer and Advancement Act*

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113, Section 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, explanations when EPA decides not to use available and applicable voluntary consensus standards.

Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards applicable to the NSPS for small MWC units that could be used in process and emissions monitoring. The search for emissions monitoring procedures identified 29 voluntary consensus standards that initially appeared to have possible use in lieu of EPA standard reference methods. After reviewing the available standards, EPA determined that 21 of the candidate consensus standards identified for measuring emissions or surrogates subject to emission standards in the final rule would not be practical due to lack of equivalency, documentation, validation data and other important technical and policy considerations. The seven remaining candidate consensus standards are under development or currently under EPA review. The EPA plans to follow, review and consider adopting those standards after their development and further review by EPA is completed.

One consensus standard, American Society for Testing and Materials (ASTM) D6216-98, is practical for EPA use in EPA Performance Specification 1 (PS-1) (40 CFR part 60, appendix B). The ASTM D6216 can best be used in place of the design specification verification procedures currently in sections 5 and 6 of PS-1. On September 23, 1998, EPA proposed incorporating by reference ASTM D6216-98 under a separate rulemaking (63 FR 50824). Comments from the proposal have been addressed, and EPA expects to complete that action in the near future. For the above reasons, EPA does not in this final rulemaking adopt ASTM D6216-98 in lieu of PS-1 requirements as it would

be impractical for EPA to act independently from another rulemaking activity already undergoing promulgation, and because ASTM D6216 does not address all of the requirements specified in PS-1.

The EPA also conducted searches to identify voluntary consensus standards for process monitoring and process operation. Candidate voluntary consensus standards for process monitoring and process operation were identified for MWC unit load level (steam output); designing, constructing, installing, calibrating, and using nozzles and orifices; and MWC plant operator certification requirements.

One consensus standard by the American Society of Mechanical Engineers (ASME) was identified for potential use in this final rule for the measurement of MWC unit load level (steam output). The EPA believes the standard is practical to use in this final rule as the method to measure MWC unit load. The EPA has already incorporated by reference "ASME Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)" in 40 CFR 60.17(h)(2).

A second consensus standard by ASME was identified for potential use in this final rule for designing, constructing, installing, calibrating, and using nozzles and orifices. The EPA believes the standard is practical to use for the design, construction, installation, calibration, and use of nozzles and orifices. The EPA has already incorporated by reference "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971)" in 40 CFR 60.17(h)(3).

A third consensus standard by ASME (QRO-1-1994) was identified for potential use in this final rule for MWC plant operator certification requirements instead of developing new operator certification procedures. The EPA believes the standard is practical to use in the emission guidelines that require a chief facility operator and shift supervisor to successfully complete the operator certification procedures developed by ASME. The EPA has already incorporated by reference (QRO-1-1994) in 40 CFR 60.17(h)(1).

Tables 3, 4 and 5 of subpart AAAA list the EPA testing methods and performance standards included in this final rule. Most of the standards have been used by States and industry for more than 10 years. Nevertheless, under § 60.8 of subpart A of part 60, the standard also allows any State or source to apply to EPA for permission to use

alternative methods in place of any of the EPA testing methods or performance standards listed in the rule.

#### *I. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This final rule will be effective June 6, 2001.

#### **List of Subjects in 40 CFR Part 60**

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Municipal waste combustion, Reporting and recordkeeping requirements.

Dated: November 3, 2000.

**Carol M. Browner,**  
*Administrator.*

For the reasons stated in the preamble, title 40, chapter I, part 60, of the Code of Federal Regulations is amended as follows:

#### **PART 60—[AMENDED]**

1. The authority citation for part 60 continues to read as follows:

**Authority:** 42 U.S.C. 7401-7601.

#### **Subpart A—[Amended]**

2. Section 60.17 is amended by revising paragraphs (h)(1), (h)(2) and (h)(3) to read as follows:

##### **§ 60.17 Incorporations by reference.**

\* \* \* \* \*

(h) \* \* \*

(1) ASME QRO-1-1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for §§ 60.56a, 60.54b(a), 60.54b(b), 60.1185(a), 60.1185(c)(2), 60.1675(a), and 60.1675(c)(2).

(2) ASME PTC 4.1-1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for §§ 60.46b, 60.58a(h)(6)(ii),

60.58b(i)(6)(ii), 60.1320(a)(3) and 60.1810(a)(3).

(3) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for §§ 60.58a(h)(6)(ii), 60.58b(i)(6)(ii), 60.1320(a)(4), and 60.1810(a)(4).

\* \* \* \* \*

3. Part 60 is amended by adding a new subpart AAAA to read as follows:

#### **Subpart AAAA—Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001**

Sec.

##### **Introduction**

60.1000 What does this subpart do?

60.1005 When does this subpart become effective?

##### **Applicability**

60.1010 Does this subpart apply to my municipal waste combustion unit?

60.1015 What is a new municipal waste combustion unit?

60.1020 Does this subpart allow any exemptions?

60.1025 Do subpart E new source performance standards also apply to my municipal waste combustion unit?

60.1030 Can the Administrator delegate authority to enforce these Federal new source performance standards to a State agency?

60.1035 How are these new source performance standards structured?

60.1040 Do all five components of these new source performance standards apply at the same time?

60.1045 Are there different subcategories of small municipal waste combustion units within this subpart?

##### **Preconstruction Requirements: Materials Separation Plan**

60.1050 Who must submit a materials separation plan?

60.1055 What is a materials separation plan?

60.1060 What steps must I complete for my materials separation plan?

60.1065 What must I include in my draft materials separation plan?

60.1070 How do I make my draft materials separation plan available to the public?

60.1075 When must I accept comments on the materials separation plan?

60.1080 Where and when must I hold a public meeting on my draft materials separation plan?

60.1085 What must I do with any public comments I receive during the public comment period on my draft materials separation plan?

60.1090 What must I do with my revised materials separation plan?

- 60.1095 What must I include in the public meeting on my revised materials separation plan?
- 60.1100 What must I do with any public comments I receive on my revised materials separation plan?
- 60.1105 How do I submit my final materials separation plan?

#### **Preconstruction Requirements: Siting Analysis**

- 60.1110 Who must submit a siting analysis?
- 60.1115 What is a siting analysis?
- 60.1120 What steps must I complete for my siting analysis?
- 60.1125 What must I include in my siting analysis?
- 60.1130 How do I make my siting analysis available to the public?
- 60.1135 When must I accept comments on the siting analysis and revised materials separation plan?
- 60.1140 Where and when must I hold a public meeting on the siting analysis?
- 60.1145 What must I do with any public comments I receive during the public comment period on my siting analysis?
- 60.1150 How do I submit my siting analysis?

#### **Good Combustion Practices: Operator Training**

- 60.1155 What types of training must I do?
- 60.1160 Who must complete the operator training course? By when?
- 60.1165 Who must complete the plant-specific training course?
- 60.1170 What plant-specific training must I provide?
- 60.1175 What information must I include in the plant-specific operating manual?
- 60.1180 Where must I keep the plant-specific operating manual?

#### **Good Combustion Practices: Operator Certification**

- 60.1185 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?
- 60.1190 After the required date for operator certification, who may operate the municipal waste combustion unit?
- 60.1195 What if all the certified operators must be temporarily offsite?

#### **Good Combustion Practices: Operating Requirements**

- 60.1200 What are the operating practice requirements for my municipal waste combustion unit?
- 60.1205 What happens to the operating requirements during periods of startup, shutdown, and malfunction?

#### **Emission Limits**

- 60.1210 What pollutants are regulated by this subpart?
- 60.1215 What emission limits must I meet? By when?
- 60.1220 What happens to the emission limits during periods of startup, shutdown, and malfunction?

#### **Continuous Emission Monitoring**

- 60.1225 What types of continuous emission monitoring must I perform?

- 60.1230 What continuous emission monitoring systems must I install for gaseous pollutants?
- 60.1235 How are the data from the continuous emission monitoring systems used?
- 60.1240 How do I make sure my continuous emission monitoring systems are operating correctly?
- 60.1245 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?
- 60.1250 What is my schedule for evaluating continuous emission monitoring systems?
- 60.1255 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?
- 60.1260 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?
- 60.1265 How do I convert my 1-hour arithmetic averages into the appropriate averaging times and units?
- 60.1270 What is required for my continuous opacity monitoring system and how are the data used?
- 60.1275 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?
- 60.1280 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?

#### **Stack Testing**

- 60.1285 What types of stack tests must I conduct?
- 60.1290 How are the stack test data used?
- 60.1295 What schedule must I follow for the stack testing?
- 60.1300 What test methods must I use to stack test?
- 60.1305 May I conduct stack testing less often?
- 60.1310 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?

#### **Other Monitoring Requirements**

- 60.1315 Must I meet other requirements for continuous monitoring?
- 60.1320 How do I monitor the load of my municipal waste combustion unit?
- 60.1325 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?
- 60.1330 How do I monitor the injection rate of activated carbon?
- 60.1335 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?

#### **Recordkeeping**

- 60.1340 What records must I keep?
- 60.1345 Where must I keep my records and for how long?
- 60.1350 What records must I keep for the materials separation plan and siting analysis?

- 60.1355 What records must I keep for operator training and certification?
- 60.1360 What records must I keep for stack tests?
- 60.1365 What records must I keep for continuously monitored pollutants or parameters?
- 60.1370 What records must I keep for municipal waste combustion units that use activated carbon?

#### **Reporting**

- 60.1375 What reports must I submit before I submit my notice of construction?
- 60.1380 What must I include in my notice of construction?
- 60.1385 What reports must I submit after I submit my notice of construction and in what form?
- 60.1390 What are the appropriate units of measurement for reporting my data?
- 60.1395 When must I submit the initial report?
- 60.1400 What must I include in my initial report?
- 60.1405 When must I submit the annual report?
- 60.1410 What must I include in my annual report?
- 60.1415 What must I do if I am out of compliance with the requirements of this subpart?
- 60.1420 If a semiannual report is required, when must I submit it?
- 60.1425 What must I include in the semiannual out-of-compliance reports?
- 60.1430 Can reporting dates be changed?

#### **Air Curtain Incinerators That Burn 100 Percent Yard Waste**

- 60.1435 What is an air curtain incinerator?
- 60.1440 What is yard waste?
- 60.1445 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?
- 60.1450 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?
- 60.1455 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?

#### **Equations**

- 60.1460 What equations must I use?

#### **Definitions**

- 60.1465 What definitions must I know?

#### **Tables**

- Table 1 of Subpart AAAA—Emission Limits For New Small Municipal Waste Combustion Units
- Table 2 of Subpart AAAA—Carbon Monoxide Emission Limits For New Small Municipal Waste Combustion Units
- Table 3 of Subpart AAAA—Requirements For Validating Continuous Emission Monitoring Systems (CEMS)
- Table 4 of Subpart AAAA—Requirements For Continuous Emission Monitoring Systems (CEMS)
- Table 5 of Subpart AAAA—Requirements For Stack Tests



## Introduction

### § 60.1000 What does this subpart do?

This subpart establishes new source performance standards for new small municipal waste combustion units.

### § 60.1005 When does this subpart become effective?

This subpart takes effect June 6, 2001. Some of the requirements in this subpart apply to municipal waste combustion unit planning and must be completed before construction is commenced on the municipal waste combustion unit. In particular, the preconstruction requirements in §§ 60.1050 through 60.1150 must be completed prior to commencing construction. Other requirements (such as the emission limits) apply when the municipal waste combustion unit begins operation.

## Applicability

### § 60.1010 Does this subpart apply to my municipal waste combustion unit?

Yes, if your municipal waste combustion unit meets two criteria:

- (a) Your municipal waste combustion unit is a new municipal waste combustion unit.
- (b) Your municipal waste combustion unit has the capacity to combust at least 35 tons per day but no more than 250 tons per day of municipal solid waste or refuse-derived fuel.

### § 60.1015 What is a new municipal waste combustion unit?

(a) A new municipal waste combustion unit is a municipal waste combustion unit that meets either of two criteria:

- (1) Commenced construction after August 30, 1999.
- (2) Commenced reconstruction or modification after June 6, 2001.

(b) This subpart does not apply to your municipal waste combustion unit if you make physical or operational changes to an existing municipal waste combustion unit primarily to comply with the emission guidelines in subpart BBBB of this part. Such changes do not qualify as reconstruction or modification under this subpart.

### § 60.1020 Does this subpart allow any exemptions?

(a) *Small municipal waste combustion units that combust less than 11 tons per day.* You are exempt from this subpart if you meet four requirements:

- (1) Your municipal waste combustion unit is subject to a federally enforceable permit limiting the amount of municipal solid waste combusted to less than 11 tons per day.

(2) You notify the Administrator that the unit qualifies for the exemption.

(3) You provide the Administrator with a copy of the federally enforceable permit.

(4) You keep daily records of the amount of municipal solid waste combusted.

(b) *Small power production facilities.* You are exempt from this subpart if you meet four requirements:

(1) Your unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) Your unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity.

(3) You notify the Administrator that the unit qualifies for the exemption.

(4) You provide the Administrator with documentation that the unit qualifies for the exemption.

(c) *Cogeneration facilities.* You are exempt from this subpart if you meet four requirements:

(1) Your unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) Your unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You notify the Administrator that the unit qualifies for the exemption.

(4) You provide the Administrator with documentation that the unit qualifies for the exemption.

(d) *Municipal waste combustion units that combust only tires.* You are exempt from this subpart if you meet three requirements:

(1) Your municipal waste combustion unit combusts a single-item waste stream of tires and no other municipal waste (the unit can co-fire coal, fuel oil, natural gas, or other nonmunicipal solid waste).

(2) You notify the Administrator that the unit qualifies for the exemption.

(3) You provide the Administrator with documentation that the unit qualifies for the exemption.

(e) *Hazardous waste combustion units.* You are exempt from this subpart if you get a permit for your unit under section 3005 of the Solid Waste Disposal Act.

(f) *Materials recovery units.* You are exempt from this subpart if your unit combusts waste mainly to recover metals. Primary and secondary smelters qualify for the exemption.

(g) *Co-fired combustors.* You are exempt from this subpart if you meet four requirements:

(1) Your unit has a federally enforceable permit limiting the combustion of municipal solid waste to 30 percent of the total fuel input by weight.

(2) You notify the Administrator that the unit qualifies for the exemption.

(3) You provide the Administrator with a copy of the federally enforceable permit.

(4) You record the weights, each quarter, of municipal solid waste and of all other fuels combusted.

(h) *Plastics/rubber recycling units.*

You are exempt from this subpart if you meet four requirements:

(1) Your pyrolysis/combustion unit is an integrated part of a plastics/rubber recycling unit as defined under "Definitions" (§ 60.1465).

(2) You record the weights, each quarter, of plastics, rubber, and rubber tires processed.

(3) You record the weights, each quarter, of feed stocks produced and marketed from chemical plants and petroleum refineries.

(4) You keep the name and address of the purchaser of those feed stocks.

(i) *Units that combust fuels made from products of plastics/rubber recycling plants.* You are exempt from this subpart if you meet two requirements:

(1) Your unit combusts gasoline, diesel fuel, jet fuel, fuel oils, residual oil, refinery gas, petroleum coke, liquified petroleum gas, propane, or butane produced by chemical plants or petroleum refineries that use feedstocks produced by plastics/rubber recycling units.

(2) Your unit does not combust any other municipal solid waste.

(j) *Cement kilns.* You are exempt from this subpart if your cement kiln combusts municipal solid waste.

(k) *Air curtain incinerators.* If your air curtain incinerator (see § 60.1465 for definition) combusts 100 percent yard waste, you must meet only the requirements under "Air Curtain Incinerators That Burn 100 Percent Yard Waste" (§§ 60.1435 through 60.1455).

### § 60.1025 Do subpart E new source performance standards also apply to my municipal waste combustion unit?

If this subpart AAAA applies to your municipal waste combustion unit, then subpart E of this part does not apply to your municipal waste combustion unit.

### § 60.1030 Can the Administrator delegate authority to enforce these Federal new source performance standards to a State agency?

Yes, the Administrator can delegate all authorities in all sections of this

subpart to the State for direct State enforcement.

**§ 60.1035 How are these new source performance standards structured?**

These new source performance standards contain five major components:

- (a) Preconstruction requirements.
  - (1) Materials separation plan.
  - (2) Siting analysis.
- (b) Good combustion practices.
  - (1) Operator training.
  - (2) Operator certification.
  - (3) Operating requirements.
- (c) Emission limits.
- (d) Monitoring and stack testing.
- (e) Recordkeeping and reporting.

**§ 60.1040 Do all five components of these new source performance standards apply at the same time?**

No, you must meet the preconstruction requirements before you commence construction of the municipal waste combustion unit. After the municipal waste combustion unit begins operation, you must meet all of the good combustion practices, emission limits, monitoring, stack testing, and most recordkeeping and reporting requirements.

**§ 60.1045 Are there different subcategories of small municipal waste combustion units within this subpart?**

(a) Yes, this subpart subcategorizes small municipal waste combustion units into two groups based on the aggregate capacity of the municipal waste combustion plant as follows:

(1) *Class I Units.* Class I units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. (See the definition of "municipal waste combustion plant capacity" in § 60.1465 for specification of which units at a plant are included in the aggregate capacity calculation.)

(2) *Class II Units.* Class II units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. (See the definition of "municipal waste combustion plant capacity" in § 60.1465 for specification of which units at a plant are included in the aggregate capacity calculation.)

(b) The requirements for Class I and Class II units are identical except for two items:

(1) Class I units have a nitrogen oxides emission limit. Class II units do not have a nitrogen oxides emission limit (see Table 1 of this subpart).

Additionally, Class I units have continuous emission monitoring, recordkeeping, and reporting requirements for nitrogen oxides.

(2) Class II units are eligible for the reduced testing option provided in § 60.1305.

**Preconstruction Requirements: Materials Separation Plan**

**§ 60.1050 Who must submit a materials separation plan?**

(a) You must prepare a materials separation plan for your municipal waste combustion unit if you commence construction of a new small municipal waste combustion unit after December 6, 2000.

(b) If you commence construction of your municipal waste combustion unit after August 30, 1999 but before December 6, 2000, you are not required to prepare the materials separation plan specified in this subpart.

(c) You must prepare a materials separation plan if you are required to submit an initial application for a construction permit, under 40 CFR part 51, subpart I, or part 52, as applicable, for the reconstruction or modification of your municipal waste combustion unit.

**§ 60.1055 What is a materials separation plan?**

The plan identifies a goal and an approach for separating certain components of municipal solid waste for a given service area prior to waste combustion and making them available for recycling.

**§ 60.1060 What steps must I complete for my materials separation plan?**

(a) For your materials separation plan, you must complete nine steps:

- (1) Prepare a draft materials separation plan.
- (2) Make your draft plan available to the public.
- (3) Hold a public meeting on your draft plan.
- (4) Prepare responses to public comments received during the public comment period on your draft plan.
- (5) Prepare a revised materials separation plan.
- (6) Discuss the revised plan at the public meeting for review of the siting analysis.
- (7) Prepare responses to public comments received on your revised plan.
- (8) Prepare a final materials separation plan.
- (9) Submit the final materials separation plan.

(b) You may use analyses conducted under the requirements of 40 CFR part 51, subpart I, or part 52, to comply with

some of the materials separation requirements of this subpart.

**§ 60.1065 What must I include in my draft materials separation plan?**

(a) You must prepare and submit a draft materials separation plan for your municipal waste combustion unit and its service area.

(b) Your draft materials separation plan must identify a goal and an approach for separating certain components of municipal solid waste for a given service area prior to waste combustion and making them available for recycling. A materials separation plan may include such elements as dropoff facilities, buy-back or deposit-return incentives, programs for curbside pickup, and centralized systems for mechanical separation.

(c) Your materials separation plan may include different goals or approaches for different subareas in the service area.

(d) Your materials separation plan may exclude materials separation activities for certain subareas or, if warranted, the entire service area.

**§ 60.1070 How do I make my draft materials separation plan available to the public?**

(a) Distribute your draft materials separation plan to the main public libraries in the area where you will construct the municipal waste combustion unit.

(b) Publish a notice of a public meeting in the main newspapers that serve two areas:

- (1) The area where you will construct the municipal waste combustion unit.
- (2) The areas where the waste that your municipal waste combustion unit combusts will be collected.

(c) Include six items in your notice of the public meeting:

- (1) The date of the public meeting.
- (2) The time of the public meeting.
- (3) The location of the public meeting.
- (4) The location of the public libraries where the public can find your materials separation plan.

Include the normal business hours of each library.

(5) An agenda of the topics that will be discussed at the public meeting.

(6) The beginning and ending dates of the public comment period on your draft materials separation plan.

**§ 60.1075 When must I accept comments on the materials separation plan?**

(a) You must accept verbal comments at the public meeting.

(b) You must accept written comments anytime during the period that begins on the date the document is distributed to the main public libraries and ends 30 days after the date of the public meeting.

**§ 60.1080 Where and when must I hold a public meeting on my draft materials separation plan?**

(a) You must hold a public meeting and accept comments on your draft materials separation plan.

(b) You must hold the public meeting in the county where you will construct the municipal waste combustion unit.

(c) You must schedule the public meeting to occur at least 30 days after you make your draft materials separation plan available to the public.

(d) You may combine the public meeting with any other public meeting required as part of any other Federal, State, or local permit review. However, you may not combine it with the public meeting required for the siting analysis under "Preconstruction Requirements: Siting Analysis" (§ 60.1140).

(e) You are encouraged to address eight topics at the public meeting for your draft materials separation plan:

(1) Expected size of the service area for your municipal waste combustion unit.

(2) Amount of waste you will collect in the service area.

(3) Types and estimated amounts of materials proposed for separation.

(4) Methods proposed for materials separation.

(5) Amount of residual waste for disposal.

(6) Alternate disposal methods for handling the residual waste.

(7) Where your responses to public comments on the draft materials separation plan will be available for inspection.

(8) Where your revised materials separation plan will be available for inspection.

(f) You must prepare a transcript of the public meeting on your draft materials separation plan.

**§ 60.1085 What must I do with any public comments I receive during the public comment period on my draft materials separation plan?**

You must do three steps:

(a) Prepare written responses to any public comments you received during the public comment period. Summarize the responses to public comments in a document that is separate from your revised materials separation plan.

(b) Make the comment response document available to the public in the service area where you will construct your municipal waste combustion unit. You must distribute the document at least to the main public libraries used to announce the public meeting.

(c) Prepare a revised materials separation plan for the municipal waste combustion unit that includes, as

appropriate, changes made in response to any public comments you received during the public comment period.

**§ 60.1090 What must I do with my revised materials separation plan?**

You must do two tasks:

(a) As specified under "Reporting" (§ 60.1375), submit five items to the Administrator by the date you submit the application for a construction permit under 40 CFR part 51, subpart I, or part 52. (If you are not required to submit an application for a construction permit under 40 CFR part 51, subpart I, or part 52, submit five items to the Administrator by the date of your notice of construction under § 60.1380):

(1) Your draft materials separation plan.

(2) Your revised materials separation plan.

(3) Your notice of the public meeting for your draft materials separation plan.

(4) A transcript of the public meeting on your draft materials separation plan.

(5) The document that summarizes your responses to the public comments you received during the public comment period on your draft materials separation plan.

(b) Make your revised materials separation plan available to the public as part of the siting analysis procedures under "Preconstruction Requirements: Siting Analysis" (§ 60.1130).

**§ 60.1095 What must I include in the public meeting on my revised materials separation plan?**

As part of the public meeting for review of the siting analysis, as specified under "Preconstruction Requirements: Siting Analysis" (§ 60.1140), you must discuss two areas:

(a) Differences between your revised materials separation plan and your draft materials separation plan discussed at the first public meeting (§ 60.1080).

(b) Questions about your revised materials separation plan.

**§ 60.1100 What must I do with any public comments I receive on my revised materials separation plan?**

(a) Prepare written responses to any public comments and include them in the document that summarizes your responses to public comments on the siting analysis.

(b) Prepare a final materials separation plan that includes, as appropriate, changes made in response to any public comments you received on your revised materials separation plan.

**§ 60.1105 How do I submit my final materials separation plan?**

As specified under "Reporting" (§ 60.1380), submit your final materials

separation plan to the Administrator as part of the notice of construction for the municipal waste combustion unit.

**Preconstruction Requirements: Siting Analysis****§ 60.1110 Who must submit a siting analysis?**

(a) You must prepare a siting analysis if you commence construction of a small municipal waste combustion unit after December 6, 2000.

(b) If you commence construction on your municipal waste combustion unit after August 30, 1999, but before December 6, 2000, you are not required to prepare the siting analysis specified in this subpart.

(c) You must prepare a siting analysis if you are required to submit an initial application for a construction permit, under 40 CFR part 51, subpart I, or part 52, as applicable, for the reconstruction or modification of your municipal waste combustion unit.

**§ 60.1115 What is a siting analysis?**

The siting analysis addresses how your municipal waste combustion unit affects ambient air quality, visibility, soils, vegetation, and other relevant factors. The analysis can be used to determine whether the benefits of your proposed facility significantly outweigh the environmental and social costs resulting from its location and construction. The analysis must also consider other major industrial facilities near the proposed site.

**§ 60.1120 What steps must I complete for my siting analysis?**

(a) For your siting analysis, you must complete five steps:

(1) Prepare an analysis.

(2) Make your analysis available to the public.

(3) Hold a public meeting on your analysis.

(4) Prepare responses to public comments received on your analysis.

(5) Submit your analysis.

(b) You may use analyses conducted under the requirements of 40 CFR part 51, subpart I, or part 52, to comply with some of the siting analysis requirements of this subpart.

**§ 60.1125 What must I include in my siting analysis?**

(a) Include an analysis of how your municipal waste combustion unit affects four areas:

(1) Ambient air quality.

(2) Visibility.

(3) Soils.

(4) Vegetation.

(b) Include an analysis of alternatives for controlling air pollution that

minimize potential risks to the public health and the environment.

**§ 60.1130 How do I make my siting analysis available to the public?**

(a) Distribute your siting analysis and revised materials separation plan to the main public libraries in the area where you will construct your municipal waste combustion unit.

(b) Publish a notice of a public meeting in the main newspapers that serve two areas:

- (1) The area where you will construct your municipal waste combustion unit.
- (2) The areas where the waste that your municipal waste combustion unit combusts will be collected.

(c) Include six items in your notice of the public meeting:

- (1) The date of the public meeting.
- (2) The time of the public meeting.
- (3) The location of the public meeting.
- (4) The location of the public libraries

where the public can find your siting analysis and revised materials separation plan. Include the normal business hours of each library.

(5) An agenda of the topics that will be discussed at the public meeting.

(6) The beginning and ending dates of the public comment period on your siting analysis and revised materials separation plan.

**§ 60.1135 When must I accept comments on the siting analysis and revised materials separation plan?**

(a) You must accept verbal comments at the public meeting.

(b) You must accept written comments anytime during the period that begins on the date the document is distributed to the main public libraries and ends 30 days after the date of the public meeting.

**§ 60.1140 Where and when must I hold a public meeting on the siting analysis?**

(a) You must hold a public meeting to discuss and accept comments on your siting analysis and your revised materials separation plan.

(b) You must hold the public meeting in the county where you will construct your municipal waste combustion unit.

(c) You must schedule the public meeting to occur at least 30 days after you make your siting analysis and revised materials separation plan available to the public.

(d) You must prepare a transcript of the public meeting on your siting analysis.

**§ 60.1145 What must I do with any public comments I receive during the public comment period on my siting analysis?**

You must do three things:

(a) Prepare written responses to any public comments on your siting analysis

and the revised materials separation plan you received during the public comment period. Summarize the responses to public comments in a document that is separate from your materials separation plan and siting analysis.

(b) Make the comment response document available to the public in the service area where you will construct your municipal waste combustion unit. You must distribute the document at least to the main public libraries used to announce the public meeting for the siting analysis.

(c) Prepare a revised siting analysis for the municipal waste combustion unit that includes, as appropriate, changes made in response to any public comments you received during the public comment period.

**§ 60.1150 How do I submit my siting analysis?**

As specified under "Reporting" (§ 60.1380), submit four items as part of the notice of construction:

- (a) Your siting analysis.
- (b) Your notice of the public meeting on your siting analysis.
- (c) A transcript of the public meeting on your siting analysis.
- (d) The document that summarizes your responses to the public comments you received during the public comment period.

**Good Combustion Practices: Operator Training**

**§ 60.1155 What types of training must I do?**

There are two types of required training:

- (a) Training of operators of municipal waste combustion units using the U.S. Environmental Protection Agency (EPA) or a State-approved training course.
- (b) Training of plant personnel using a plant-specific training course.

**§ 60.1160 Who must complete the operator training course? By when?**

(a) Three types of employees must complete the EPA or State-approved operator training course:

- (1) Chief facility operators.
- (2) Shift supervisors.
- (3) Control room operators.
- (b) Those employees must complete the operator training course by the later of three dates:

- (1) Six months after your municipal waste combustion unit initial startup.
- (2) December 6, 2001.
- (3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

**§ 60.1165 Who must complete the plant-specific training course?**

All employees with responsibilities that affect how a municipal waste combustion unit operates must complete the plant-specific training course. Include at least six types of employees:

- (a) Chief facility operators.
- (b) Shift supervisors.
- (c) Control room operators.
- (d) Ash handlers.
- (e) Maintenance personnel.
- (f) Crane or load handlers.

**§ 60.1170 What plant-specific training must I provide?**

For plant-specific training, you must do four things:

(a) For training at a particular plant, develop a specific operating manual for that plant by the later of two dates:

- (1) Six months after your municipal waste combustion unit initial startup.
- (2) December 6, 2001.

(b) Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of your municipal waste combustion unit. Complete the initial review by the later of three dates:

- (1) Six months after your municipal waste combustion unit initial startup.
- (2) December 6, 2001.
- (3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

- (c) Update your manual annually.
- (d) Review your manual with staff annually.

**§ 60.1175 What information must I include in the plant-specific operating manual?**

You must include 11 items in the operating manual for your plant:

- (a) A summary of all applicable requirements in this subpart.
- (b) A description of the basic combustion principles that apply to municipal waste combustion units.
- (c) Procedures for receiving, handling, and feeding municipal solid waste.
- (d) Procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustion unit.
- (e) Procedures for maintaining a proper level of combustion air supply.
- (f) Procedures for operating the municipal waste combustion unit in compliance with the requirements contained in this subpart.
- (g) Procedures for responding to periodic upset or off-specification conditions.
- (h) Procedures for minimizing carryover of particulate matter.
- (i) Procedures for handling ash.

(j) Procedures for monitoring emissions from the municipal waste combustion unit.

(k) Procedures for recordkeeping and reporting.

**§ 60.1180 Where must I keep the plant-specific operating manual?**

You must keep your operating manual in an easily accessible location at your plant. It must be available for review or inspection by all employees who must review it and by the Administrator.

**Good Combustion Practices: Operator Certification**

**§ 60.1185 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?**

(a) Each chief facility operator and shift supervisor must obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in § 60.17(h)(1)) or a current provisional operator certification from your State certification program.

(b) Each chief facility operator and shift supervisor must obtain a provisional certification by the later of three dates:

(1) Six months after the municipal waste combustion unit initial startup.

(2) December 6, 2001.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

(c) Each chief facility operator and shift supervisor must take one of three actions:

(1) Obtain a full certification from the American Society of Mechanical Engineers or a State certification program in your State.

(2) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in § 60.17(h)(1)).

(3) Schedule a full certification exam with your State certification program.

(d) The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by the later of three dates:

(1) Six months after the municipal waste combustion unit initial startup.

(2) December 6, 2001.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

**§ 60.1190 After the required date for operator certification, who may operate the municipal waste combustion unit?**

After the required date for full or provisional certifications, you must not operate your municipal waste combustion unit unless one of four employees is on duty:

(a) A fully certified chief facility operator.

(b) A provisionally certified chief facility operator who is scheduled to take the full certification exam.

(c) A fully certified shift supervisor.

(d) A provisionally certified shift supervisor who is scheduled to take the full certification exam.

**§ 60.1195 What if all the certified operators must be temporarily offsite?**

If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustion unit may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, you must meet one of three criteria:

(a) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator.

(b) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must record the period when the certified chief facility operator and certified shift supervisor are offsite and include that information in the annual report as specified under § 60.1410(l).

(c) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must take two actions:

(1) Notify the Administrator in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is onsite.

(2) Submit a status report and corrective action summary to the

Administrator every 4 weeks following the initial notification. If the Administrator notifies you that your status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Administrator withdraws the disapproval, municipal waste combustion unit operation may continue.

**Good Combustion Practices: Operating Requirements**

**§ 60.1200 What are the operating practice requirements for my municipal waste combustion unit?**

(a) You must not operate your municipal waste combustion unit at loads greater than 110 percent of the maximum demonstrated load of the municipal waste combustion unit (4-hour block average), as specified under "Definitions" (§ 60.1465).

(b) You must not operate your municipal waste combustion unit so that the temperature at the inlet of the particulate matter control device exceeds 17°C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average), as specified under "Definitions" (§ 60.1465).

(c) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test.

(d) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to your municipal waste combustion plant must be at or above the required quarterly usage of carbon. At your option, you may choose to evaluate required quarterly carbon usage on a municipal waste combustion unit basis for each individual municipal waste combustion unit at your plant. Calculate the required quarterly usage of carbon using equation 4 or 5 in § 60.1460(f).

(e) Your municipal waste combustion unit is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations:

(1) During your annual tests for dioxins/furans.

(2) During your annual mercury tests (for carbon feed rate requirements only).

(3) During the 2 weeks preceding your annual tests for dioxins/furans.

(4) During the 2 weeks preceding your annual mercury tests (for carbon feed rate requirements only).

(5) Whenever the Administrator or delegated State authority permits you to do any of five activities:

(i) Evaluate system performance.

(ii) Test new technology or control technologies.

(iii) Perform diagnostic testing.

(iv) Perform other activities to improve the performance of your municipal waste combustion unit.

(v) Perform other activities to advance the state of the art for emission controls for your municipal waste combustion unit.

**§ 60.1205 What happens to the operating requirements during periods of startup, shutdown, and malfunction?**

(a) The operating requirements of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

**Emission Limits**

**§ 60.1210 What pollutants are regulated by this subpart?**

Eleven pollutants, in four groupings, are regulated:

(a) *Organics*. Dioxins/furans.

(b) *Metals*.

(1) Cadmium.

(2) Lead.

(3) Mercury.

(4) Opacity.

(5) Particulate matter.

(c) *Acid gases*.

(1) Hydrogen chloride.

(2) Nitrogen oxides.

(3) Sulfur dioxide.

(d) *Other*.

(1) Carbon monoxide.

(2) Fugitive ash.

**§ 60.1215 What emission limits must I meet? By when?**

You must meet the emission limits specified in Tables 1 and 2 of this subpart. You must meet the limits 60 days after your municipal waste combustion unit reaches the maximum load level but no later than 180 days after its initial startup.

**§ 60.1220 What happens to the emission limits during periods of startup, shutdown, and malfunction?**

(a) The emission limits of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

(c) A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.

(d) During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under § 60.11(d) apply.

**Continuous Emission Monitoring**

**§ 60.1225 What types of continuous emission monitoring must I perform?**

To continuously monitor emissions, you must perform four tasks:

(a) Install continuous emission monitoring systems for certain gaseous pollutants.

(b) Make sure your continuous emission monitoring systems are operating correctly.

(c) Make sure you obtain the minimum amount of monitoring data.

(d) Install a continuous opacity monitoring system.

**§ 60.1230 What continuous emission monitoring systems must I install for gaseous pollutants?**

(a) You must install, calibrate, maintain, and operate continuous emission monitoring systems for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide. If you operate a Class I municipal waste combustion unit, you must also install, calibrate, maintain, and operate a continuous emission monitoring system for nitrogen oxides. Install the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and oxygen (or carbon dioxide) at the outlet of the air pollution control device.

(b) You must install, evaluate, and operate each continuous emission monitoring system according to the "Monitoring Requirements" in § 60.13.

(c) You must monitor the oxygen (or carbon dioxide) concentration at each location where you monitor sulfur dioxide and carbon monoxide. Additionally, if you operate a Class I municipal waste combustion unit, you must also monitor the oxygen (or carbon dioxide) concentration at the location where you monitor nitrogen oxides.

(d) You may choose to monitor carbon dioxide instead of oxygen as a diluent gas. If you choose to monitor carbon dioxide, then an oxygen monitor is not required, and you must follow the requirements in § 60.1255.

(e) If you choose to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, you must

also install continuous emission monitoring systems for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device.

(f) If you prefer to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction, you can apply to the Administrator for approval to use an alternative monitoring method under § 60.13(i).

**§ 60.1235 How are the data from the continuous emission monitoring systems used?**

You must use data from the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and carbon monoxide to demonstrate continuous compliance with the emission limits specified in Tables 1 and 2 of this subpart. To demonstrate compliance for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, see § 60.1290.

**§ 60.1240 How do I make sure my continuous emission monitoring systems are operating correctly?**

(a) Conduct initial, daily, quarterly, and annual evaluations of your continuous emission monitoring systems that measure oxygen (or carbon dioxide), sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide.

(b) Complete your initial evaluation of the continuous emission monitoring systems within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

(c) For initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using your oxygen (or carbon dioxide) continuous emission monitoring system, your sulfur dioxide, nitrogen oxides, or carbon monoxide continuous emission monitoring systems, as appropriate, and the appropriate test methods specified in Table 3 of this subpart. Collect the data during each initial and annual evaluation of your continuous emission monitoring systems following the applicable performance specifications in appendix B of this part. Table 4 of this subpart shows the performance specifications that apply to each continuous emission monitoring system.

(d) Follow the quality assurance procedures in Procedure 1 of appendix F of this part for each continuous emission monitoring system. The procedures include daily calibration

drift and quarterly accuracy determinations.

**§ 60.1245 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?**

Yes, the accuracy tests for your sulfur dioxide continuous emission monitoring system require you to also evaluate your oxygen (or carbon dioxide) continuous emission monitoring system. Therefore, your oxygen (or carbon dioxide) continuous emission monitoring system is exempt from two requirements:

- (a) Section 2.3 of Performance Specification 3 in appendix B of this part (relative accuracy requirement).
- (b) Section 5.1.1 of appendix F of this part (relative accuracy test audit).

**§ 60.1250 What is my schedule for evaluating continuous emission monitoring systems?**

(a) Conduct annual evaluations of your continuous emission monitoring systems no more than 13 months after the previous evaluation was conducted.

(b) Evaluate your continuous emission monitoring systems daily and quarterly as specified in appendix F of this part.

**§ 60.1255 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?**

You must establish the relationship between oxygen and carbon dioxide during the initial evaluation of your continuous emission monitoring systems. You may reestablish the relationship during annual evaluations. To establish the relationship use three procedures:

- (a) Use EPA Reference Method 3A or 3B in appendix A of this part to determine oxygen concentration at the location of your carbon dioxide monitor.
- (b) Conduct at least three test runs for oxygen. Make sure each test run represents a 1-hour average and that sampling continues for at least 30 minutes in each hour.
- (c) Use the fuel-factor equation in EPA Reference Method 3B in appendix A of this part to determine the relationship between oxygen and carbon dioxide.

**§ 60.1260 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?**

(a) Where continuous emission monitoring systems are required, obtain 1-hour arithmetic averages. Make sure the averages for sulfur dioxide, nitrogen oxides, and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level). Use the 1-hour

averages of oxygen (or carbon dioxide) data from your continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level).

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Section 60.13(e)(2) requires your continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period.

(c) Obtain valid 1-hour averages for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement regardless of the emission level monitored, and you must notify the Administrator according to § 60.1410(e).

(e) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with § 60.1265.

**§ 60.1265 How do I convert my 1-hour arithmetic averages into the appropriate averaging times and units?**

(a) Use the equation in § 60.1460(a) to calculate emissions at 7 percent oxygen.

(b) Use EPA Reference Method 19 in appendix A of this part, section 4.3, to calculate the daily geometric average concentrations of sulfur dioxide emissions. If you are monitoring the percent reduction of sulfur dioxide, use EPA Reference Method 19 in appendix A of this part, section 5.4, to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.

(c) If you operate a Class I municipal waste combustion unit, use EPA Reference Method 19 in appendix A of this part, section 4.1, to calculate the daily arithmetic average for concentrations of nitrogen oxides.

(d) Use EPA Reference Method 19 in appendix A of this part, section 4.1, to calculate the 4-hour or 24-hour daily block averages (as applicable) for concentrations of carbon monoxide.

**§ 60.1270 What is required for my continuous opacity monitoring system and how are the data used?**

(a) Install, calibrate, maintain, and operate a continuous opacity monitoring system.

(b) Install, evaluate, and operate each continuous opacity monitoring system according to § 60.13.

(c) Complete an initial evaluation of your continuous opacity monitoring system according to Performance Specification 1 in appendix B of this part. Complete the evaluation within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no more than 180 days after its initial startup.

(d) Complete each annual evaluation of your continuous opacity monitoring system no more than 13 months after the previous evaluation.

(e) Use tests conducted according to EPA Reference Method 9 in appendix A of this part, as specified in § 60.1300, to determine compliance with the opacity limit in Table 1 of this subpart. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the opacity limit.

**§ 60.1275 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?**

Use the required span values and applicable performance specifications in Table 4 of this subpart.

**§ 60.1280 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?**

Refer to Table 4 of this subpart. It shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

**Stack Testing**

**§ 60.1285 What types of stack tests must I conduct?**

Conduct initial and annual stack tests to measure the emission levels of dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

**§ 60.1290 How are the stack test data used?**

You must use results of stack tests for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the emission limits in Table 1 of this



subpart. To demonstrate compliance for carbon monoxide, nitrogen oxides, and sulfur dioxide, see § 60.1235.

**§ 60.1295 What schedule must I follow for the stack testing?**

(a) Conduct initial stack tests for the pollutants listed in § 60.1285 within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

(b) Conduct annual stack tests for the same pollutants after the initial stack test. Conduct each annual stack test no later than 13 months after the previous stack test.

**§ 60.1300 What test methods must I use to stack test?**

(a) Follow Table 5 of this subpart to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

(b) Make sure that stack tests for all the pollutants consist of at least three test runs, as specified in § 60.8. Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the emission limits in Table 1 of this subpart.

(c) Obtain an oxygen (or carbon dioxide) measurement at the same time as your pollutant measurements to determine diluent gas levels, as specified in § 60.1230.

(d) Use the equations in § 60.1460(a) to calculate emission levels at 7 percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in Table 5 of this subpart for other required equations.

(e) You can apply to the Administrator for approval under § 60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which the Administrator has determined are adequate for demonstrating compliance, waive the requirement for a performance test because you have demonstrated by other means that you are in compliance, or use a shorter sampling time or smaller sampling volume.

**§ 60.1305 May I conduct stack testing less often?**

(a) You may test less often if you own or operate a Class II municipal waste combustion unit and if all stack tests for

a given pollutant over 3 consecutive years show you comply with the emission limit. In that case, you are not required to conduct a stack test for that pollutant for the next 2 years. However, you must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows you comply with the emission limit. Thereafter, you must perform stack tests every 3rd year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, you must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The provision applies to all pollutants subject to stack testing requirements: dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

(b) You can test less often for dioxins/furans emissions if you own or operate a municipal waste combustion plant that meets two conditions. First, you have multiple municipal waste combustion units onsite that are subject to this subpart. Second, all those municipal waste combustion units have demonstrated levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass) for 2 consecutive years. In that case, you may choose to conduct annual stack tests on only one municipal waste combustion unit per year at your plant. The provision only applies to stack testing for dioxins/furans emissions.

(1) Conduct the stack test no more than 13 months following a stack test on any municipal waste combustion unit subject to this subpart at your plant. Each year, test a different municipal waste combustion unit subject to this subpart and test all municipal waste combustion units subject to this subpart in a sequence that you determine. Once you determine a testing sequence, it must not be changed without approval by the Administrator.

(2) If each annual stack test shows levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass), you may continue stack tests on only one municipal waste combustion unit subject to this subpart per year.

(3) If any annual stack test indicates levels of dioxins/furans emissions greater than 7 nanograms per dry standard cubic meter (total mass), conduct subsequent annual stack tests on all municipal waste combustion units subject to this subpart at your plant. You may return to testing one

municipal waste combustion unit subject to this subpart per year if you can demonstrate dioxins/furans emission levels less than or equal to 7 nanograms per dry standard cubic meter (total mass) for all municipal waste combustion units at your plant subject to this subpart for 2 consecutive years.

**§ 60.1310 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?**

You may not deviate from the 13-month testing schedules specified in §§ 60.1295(b) and 60.1305(b)(1) unless you apply to the Administrator for an alternative schedule, and the Administrator approves your request for alternate scheduling prior to the date on which you would otherwise have been required to conduct the next stack test.

**Other Monitoring Requirements**

**§ 60.1315 Must I meet other requirements for continuous monitoring?**

You must also monitor three operating parameters:

(a) Load level of each municipal waste combustion unit.

(b) Temperature of flue gases at the inlet of your particulate matter air pollution control device.

(c) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

**§ 60.1320 How do I monitor the load of my municipal waste combustion unit?**

(a) If your municipal waste combustion unit generates steam, you must install, calibrate, maintain, and operate a steam flowmeter or a feed water flowmeter and meet five requirements:

(1) Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.

(2) Calculate your steam (or feed water) flow in 4-hour block averages.

(3) Calculate the steam (or feed water) flow rate using the method in "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1—1964 (R1991)," section 4 (incorporated by reference in § 60.17(h)(2)).

(4) Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters," 6th Edition (1971), chapter 4 (incorporated by reference in § 60.17(h)(3)).

(5) Before each dioxins/furans stack test, or at least once a year, calibrate all



signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.

(b) If your municipal waste combustion unit does not generate steam, or, if your municipal waste combustion units have shared steam systems and steam load cannot be estimated per unit, you must determine, to the satisfaction of the Administrator, one or more operating parameters that can be used to continuously estimate load level (for example, the feed rate of municipal solid waste or refuse-derived fuel). You must continuously monitor the selected parameters.

**§ 60.1325 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?**

You must install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device.

**§ 60.1330 How do I monitor the injection rate of activated carbon?**

If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must meet three requirements:

(a) Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).

(b) During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.

(c) Continuously monitor the selected operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste, and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter. When calculating the 8-hour block average, do two things:

- (1) Exclude hours when the municipal waste combustion unit is not operating.
- (2) Include hours when the municipal waste combustion unit is operating but the carbon feed system is not working correctly.

**§ 60.1335 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?**

(a) Where continuous parameter monitoring systems are used, obtain 1-hour arithmetic averages for three parameters:

(1) Load level of the municipal waste combustion unit.

(2) Temperature of the flue gases at the inlet of your particulate matter control device.

(3) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.

(c) Obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement and you must notify the Administrator according to § 60.1410(e).

**Recordkeeping**

**§ 60.1340 What records must I keep?**

You must keep five types of records:

- (a) Materials separation plan and siting analysis.
- (b) Operator training and certification.
- (c) Stack tests.
- (d) Continuously monitored pollutants and parameters.
- (e) Carbon feed rate.

**§ 60.1345 Where must I keep my records and for how long?**

(a) Keep all records onsite in paper copy or electronic format unless the Administrator approves another format.

(b) Keep all records on each municipal waste combustion unit for at least 5 years.

(c) Make all records available for submittal to the Administrator, or for onsite review by an inspector.

**§ 60.1350 What records must I keep for the materials separation plan and siting analysis?**

You must keep records of five items:

- (a) The date of each record.
- (b) The final materials separation plan.
- (c) The siting analysis.
- (d) A record of the location and date of the public meetings.
- (e) Your responses to the public comments received during the public comment periods.

**§ 60.1355 What records must I keep for operator training and certification?**

You must keep records of six items:

(a) *Records of provisional certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of the initial provisional certifications.

(3) Documentation showing current provisional certifications.

(b) *Records of full certifications.*

Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of initial and renewal full certifications.

(3) Documentation showing current full certifications.

(c) *Records showing completion of the operator training course.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course.

(2) Dates of completion of the operator training course.

(3) Documentation showing completion of the operator training course.

(d) *Records of reviews for plant-specific operating manuals.* Include three items:

(1) Names of persons who have reviewed the operating manual.

(2) Date of the initial review.

(3) Dates of subsequent annual reviews.

(e) *Records of when a certified operator is temporarily offsite.* Include two main items:

(1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.

(2) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:

- (i) Your notice that all certified persons are offsite.
- (ii) The conditions that cause those people to be offsite.
- (iii) The corrective actions you are taking to ensure a certified chief facility operator or certified shift supervisor is onsite.
- (iv) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.
- (f) *Records of calendar dates.* Include the calendar date on each record.

**§ 60.1360 What records must I keep for stack tests?**

For stack tests required under § 60.1285, you must keep records of four items:

- (a) The results of the stack tests for eight pollutants or parameters recorded in the appropriate units of measure specified in Table 1 of this subpart:
  - (1) Dioxins/furans.
  - (2) Cadmium.
  - (3) Lead.
  - (4) Mercury.
  - (5) Opacity.
  - (6) Particulate matter.
  - (7) Hydrogen chloride.
  - (8) Fugitive ash.
- (b) Test reports including supporting calculations that document the results of all stack tests.
- (c) The maximum demonstrated load of your municipal waste combustion units and maximum temperature at the inlet of your particulate matter control device during all stack tests for dioxins/furans emissions.
- (d) The calendar date of each record.

**§ 60.1365 What records must I keep for continuously monitored pollutants or parameters?**

You must keep records of eight items:

- (a) *Records of monitoring data.* Document six parameters measured using continuous monitoring systems:
  - (1) All 6-minute average levels of opacity.
  - (2) All 1-hour average concentrations of sulfur dioxide emissions.
  - (3) For Class I municipal waste combustion units only, all 1-hour average concentrations of nitrogen oxides emissions.
  - (4) All 1-hour average concentrations of carbon monoxide emissions.
  - (5) All 1-hour average load levels of your municipal waste combustion unit.
  - (6) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.
- (b) *Records of average concentrations and percent reductions.* Document five parameters:

- (1) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions.

- (2) For Class I municipal waste combustion units only, all 24-hour daily arithmetic average concentrations of nitrogen oxides emissions.

- (3) All 4-hour block or 24-hour daily block arithmetic average concentrations of carbon monoxide emissions.

- (4) All 4-hour block arithmetic average load levels of your municipal waste combustion unit.

- (5) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.

- (c) *Records of exceedances.* Document three items:

- (1) Calendar dates whenever any of the five pollutant or parameter levels recorded in paragraph (b) of this section or the opacity level recorded in paragraph (a)(1) of this section did not meet the emission limits or operating levels specified in this subpart.

- (2) Reasons you exceeded the applicable emission limits or operating levels.

- (3) Corrective actions you took, or are taking, to meet the emission limits or operating levels.

- (d) *Records of minimum data.* Document three items:

- (1) Calendar dates for which you did not collect the minimum amount of data required under §§ 60.1260 and 60.1335. Record the dates for five types of pollutants and parameters:

- (i) Sulfur dioxide emissions.
- (ii) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (iii) Carbon monoxide emissions.
- (iv) Load levels of your municipal waste combustion unit.
- (v) Temperatures of the flue gases at the inlet of the particulate matter control device.

- (2) Reasons you did not collect the minimum data.

- (3) Corrective actions you took, or are taking, to obtain the required amount of data.

- (e) *Records of exclusions.* Document each time you have excluded data from your calculation of averages for any of the following five pollutants or parameters and the reasons the data were excluded:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load levels of your municipal waste combustion unit.

- (5) Temperatures of the flue gases at the inlet of the particulate matter control device.

- (f) *Records of drift and accuracy.* Document the results of your daily drift tests and quarterly accuracy determinations according to Procedure 1 of appendix F of this part. Keep the records for the sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide continuous emissions monitoring systems.

- (g) *Records of the relationship between oxygen and carbon dioxide.* If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, document the relationship between oxygen and carbon dioxide, as specified in § 60.1255.

- (h) *Records of calendar dates.* Include the calendar date on each record.

**§ 60.1370 What records must I keep for municipal waste combustion units that use activated carbon?**

For municipal waste combustion units that use activated carbon to control dioxins/furans or mercury emissions, you must keep records of five items:

- (a) *Records of average carbon feed rate.* Document five items:

- (1) Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.

- (2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.

- (3) All 8-hour block average carbon feed rates in kilograms (or pounds) per hour calculated from the monitored operating parameter.

- (4) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include supporting documentation.

- (5) Required quarterly usage of carbon for the municipal waste combustion plant, calculated using equation 4 or 5 in § 60.1460(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit

at your plant. Include supporting calculations.

(b) *Records of low carbon feed rates.* Document three items:

(1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).

(2) Reasons for the low carbon feed rates.

(3) Corrective actions you took or are taking to meet the 8-hour average carbon feed rate requirement.

(c) *Records of minimum carbon feed rate data.* Document three items:

(1) Calendar dates for which you did not collect the minimum amount of carbon feed rate data required under § 60.1335.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took or are taking to get the required amount of data.

(d) *Records of exclusions.* Document each time you have excluded data from your calculation of average carbon feed rates and the reasons the data were excluded.

(e) *Records of calendar dates.* Include the calendar date on each record.

## Reporting

### § 60.1375 What reports must I submit before I submit my notice of construction?

(a) If you are required to submit an application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, you must submit five items by the date you submit your application.

(1) Your draft materials separation plan, as specified in § 60.1065.

(2) Your revised materials separation plan, as specified in § 60.1085(c).

(3) Your notice of the initial public meeting for your draft materials separation plan, as specified in § 60.1070(b).

(4) A transcript of the initial public meeting, as specified in § 60.1080(f).

(5) The document that summarizes your responses to the public comments you received during the initial public comment period, as specified in § 60.1085(a).

(b) If you are not required to submit an application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, you must submit the items in paragraph (a) of this section with your notice of construction.

### § 60.1380 What must I include in my notice of construction?

(a) Include ten items:

(1) A statement of your intent to construct the municipal waste combustion unit.

(2) The planned initial startup date of your municipal waste combustion unit.

(3) The types of fuels you plan to combust in your municipal waste combustion unit.

(4) The capacity of your municipal waste combustion unit including supporting capacity calculations, as specified in § 60.1460(d) and (e).

(5) Your siting analysis, as specified in § 60.1125.

(6) Your final materials separation plan, as specified in § 60.1100(b).

(7) Your notice of the second public meeting (siting analysis meeting), as specified in § 60.1130(b).

(8) A transcript of the second public meeting, as specified in § 60.1140(d).

(9) A copy of the document that summarizes your responses to the public comments you received during the second public comment period, as specified in § 60.1145(a).

(10) Your final siting analysis, as specified in § 60.1145(c).

(b) Submit your notice of construction no later than 30 days after you commence construction, reconstruction, or modification of your municipal waste combustion unit.

### § 60.1385 What reports must I submit after I submit my notice of construction and in what form?

(a) Submit an initial report and annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits specified in this subpart.

(b) Submit all reports on paper, postmarked on or before the submittal dates in §§ 60.1395, 60.1405, and 60.1420. If the Administrator agrees, you may submit electronic reports.

(c) Keep a copy of all reports required by §§ 60.1400, 60.1410, and 60.1425 onsite for 5 years.

### § 60.1390 What are the appropriate units of measurement for reporting my data?

See Tables 1 and 2 of this subpart for appropriate units of measurement.

### § 60.1395 When must I submit the initial report?

As specified in § 60.7(c), submit your initial report within 60 days after your municipal waste combustion unit reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup.

### § 60.1400 What must I include in my initial report?

You must include seven items:

(a) The emission levels measured on the date of the initial evaluation of your

continuous emission monitoring systems for all of the following five pollutants or parameters as recorded in accordance with § 60.1365(b).

(1) The 24-hour daily geometric average concentration of sulfur dioxide emissions or the 24-hour daily geometric percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, the 24-hour daily arithmetic average concentration of nitrogen oxides emissions.

(3) The 4-hour block or 24-hour daily arithmetic average concentration of carbon monoxide emissions.

(4) The 4-hour block arithmetic average load level of your municipal waste combustion unit.

(5) The 4-hour block arithmetic average flue gas temperature at the inlet of the particulate matter control device.

(b) The results of the initial stack tests for eight pollutants or parameters (use appropriate units as specified in Table 2 of this subpart):

(1) Dioxins/furans.

(2) Cadmium.

(3) Lead.

(4) Mercury.

(5) Opacity.

(6) Particulate matter.

(7) Hydrogen chloride.

(8) Fugitive ash.

(c) The test report that documents the initial stack tests including supporting calculations.

(d) The initial performance evaluation of your continuous emissions monitoring systems. Use the applicable performance specifications in appendix B of this part in conducting the evaluation.

(e) The maximum demonstrated load of your municipal waste combustion unit and the maximum demonstrated temperature of the flue gases at the inlet of the particulate matter control device. Use values established during your initial stack test for dioxins/furans emissions and include supporting calculations.

(f) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, the average carbon feed rates that you recorded during the initial stack tests for dioxins/furans and mercury emissions. Include supporting calculations as specified in § 60.1370(a)(1) and (2).

(g) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in § 60.1255.

**§ 60.1405 When must I submit the annual report?**

Submit the annual report no later than February 1 of each year that follows the calendar year in which you collected the data. If you have an operating permit for any unit under title V of the Clean Air Act (CAA), the permit may require you to submit semiannual reports. Parts 70 and 71 of this chapter contain program requirements for permits.

**§ 60.1410 What must I include in my annual report?**

Summarize data collected for all pollutants and parameters regulated under this subpart. Your summary must include twelve items:

(a) The results of the annual stack test, using appropriate units, for eight pollutants, as recorded under

§ 60.1360(a):

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Particulate matter.
- (6) Opacity.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(b) A list of the highest average levels recorded, in the appropriate units. List the values for five pollutants or parameters:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.
- (5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).

(c) The highest 6-minute opacity level measured. Base the value on all 6-minute average opacity levels recorded by your continuous opacity monitoring system (§ 60.1365(a)(1)).

(d) For municipal waste combustion units that use activated carbon for controlling dioxins/furans or mercury emissions, include four records:

- (1) The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.
- (2) The lowest 8-hour block average carbon feed rate recorded during the year.
- (3) The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant.

(4) The required quarterly carbon usage of your municipal waste combustion plant calculated using equation 4 or 5 in § 60.1460(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant.

(e) The total number of days that you did not obtain the minimum number of hours of data for six pollutants or parameters. Include the reasons you did not obtain the data and corrective actions that you have taken to obtain the data in the future. Include data on:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

(6) Carbon feed rate.

(f) The number of hours you have excluded data from the calculation of average levels (include the reasons for excluding it). Include data for six pollutants or parameters:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

(6) Carbon feed rate.

(g) A notice of your intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year, if you are eligible for alternative scheduling (§ 60.1305(a) or (b)).

(h) A notice of your intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if you are eligible for alternative scheduling (§ 60.1305(a)).

(i) A summary of any emission or parameter level that did not meet the limits specified in this subpart.

(j) A summary of the data in paragraphs (a) through (d) of this section from the year preceding the reporting year which gives the Administrator a summary of the performance of the municipal waste combustion unit over a 2-year period.

(k) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in § 60.1255.

(l) Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.

**§ 60.1415 What must I do if I am out of compliance with the requirements of this subpart?**

You must submit a semiannual report on any recorded emission or parameter level that does not meet the requirements specified in this subpart.

**§ 60.1420 If a semiannual report is required, when must I submit it?**

(a) For data collected during the first half of a calendar year, submit your semiannual report by August 1 of that year.

(b) For data you collected during the second half of the calendar year, submit your semiannual report by February 1 of the following year.

**§ 60.1425 What must I include in the semiannual out-of-compliance reports?**

You must include three items in the semiannual report:

(a) For any of the following six pollutants or parameters that exceeded the limits specified in this subpart, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and your corrective actions:

- (1) Concentration or percent reduction of sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, concentration of nitrogen oxides emissions.
- (3) Concentration of carbon monoxide emissions.

(4) Load level of your municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of your particulate matter air pollution control device.

(6) Average 6-minute opacity level. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions.

(b) If the results of your annual stack tests (as recorded in § 60.1360(a)) show emissions above the limits specified in Table 1 of this subpart for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and your corrective actions.

(c) For municipal waste combustion units that apply activated carbon to control dioxins/furans or mercury emissions, include two items:

- (1) Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon

injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in § 60.1370(a)(1)). Include four items:

- (i) Eight-hour average carbon feed rate.
- (ii) Reasons for occurrences of low carbon feed rates.
- (iii) The corrective actions you have taken to meet the carbon feed rate requirement.
- (iv) The calendar date.

(2) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include five items:

- (i) Amount of carbon purchased and delivered to the plant.
- (ii) Required quarterly usage of carbon.
- (iii) Reasons for not meeting the required quarterly usage of carbon.
- (iv) The corrective actions you have taken to meet the required quarterly usage of carbon.
- (v) The calendar date.

#### **§ 60.1430 Can reporting dates be changed?**

- (a) If the Administrator agrees, you may change the semiannual or annual reporting dates.
- (b) See § 60.19(c) for procedures to seek approval to change your reporting date.

#### **Air Curtain Incinerators that Burn 100 Percent Yard Waste**

##### **§ 60.1435 What is an air curtain incinerator?**

An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

##### **§ 60.1440 What is yard waste?**

Yard waste is grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

- (a) Construction, renovation, and demolition wastes that are exempt from

the definition of "municipal solid waste" in § 60.1465.

(b) Clean wood that is exempt from the definition of "municipal solid waste" in § 60.1465.

##### **§ 60.1445 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?**

If your air curtain incinerator combusts 100 percent yard waste, you must meet only the emission limits in this section.

(a) Within 60 days after your air curtain incinerator reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup, you must meet two limits:

(1) The opacity limit is 10 percent (6-minute average) for air curtain incinerators that can combust at least 35 tons per day of municipal solid waste and no more than 250 tons per day of municipal solid waste.

(2) The opacity limit is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times. Each malfunction must not exceed 3 hours.

##### **§ 60.1450 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?**

(a) Use EPA Reference Method 9 in appendix A of this part to determine compliance with the opacity limit.

(b) Conduct an initial test for opacity as specified in § 60.8.

(c) After the initial test for opacity, conduct annual tests no more than 13 calendar months following the date of your previous test.

##### **§ 60.1455 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?**

(a) Provide a notice of construction that includes four items:

- (1) Your intent to construct the air curtain incinerator.
- (2) Your planned initial startup date.
- (3) Types of fuels you plan to combust in your air curtain incinerator.
- (4) The capacity of your incinerator, including supporting capacity calculations, as specified in § 60.1460(d) and (e).

(b) Keep records of results of all opacity tests onsite in either paper copy or electronic format unless the Administrator approves another format.

(c) Keep all records for each incinerator for at least 5 years.

(d) Make all records available for submittal to the Administrator or for onsite review by an inspector.

(e) Submit the results (each 6-minute average) of the opacity tests by February 1 of the year following the year of the opacity emission test.

(f) Submit reports as a paper copy on or before the applicable submittal date. If the Administrator agrees, you may submit reports on electronic media.

(g) If the Administrator agrees, you may change the annual reporting dates (see § 60.19(c)).

(h) Keep a copy of all reports onsite for a period of 5 years.

#### **Equations**

##### **§ 60.1460 What equations must I use?**

(a) *Concentration correction to 7 percent oxygen.* Correct any pollutant concentration to 7 percent oxygen using equation 1 of this section:

$$C_{7\%} = C_{unc} * (13.9) * (1/(20.9 - CO_2)) \quad (Eq. 1)$$

Where:

$C_{7\%}$  = concentration corrected to 7 percent oxygen.

$C_{unc}$  = uncorrected pollutant concentration.

$CO_2$  = concentration of oxygen (percent).

(b) *Percent reduction in potential mercury emissions.* Calculate the percent reduction in potential mercury emissions (%P<sub>Hg</sub>) using equation 2 of this section:

$$\%P_{Hg} = (E_i - E_o) * (100/E_i) \quad (Eq. 2)$$

Where:

%P<sub>Hg</sub> = percent reduction of potential mercury emissions

$E_i$  = mercury emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

$E_o$  = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(c) *Percent reduction in potential hydrogen chloride emissions.* Calculate the percent reduction in potential hydrogen chloride emissions (%P<sub>HCl</sub>) using equation 3 of this section:

$$\%P_{HCl} = (E_i - E_o) * (100/E_i) \quad (Eq. 3)$$

Where:

%P<sub>HCl</sub> = percent reduction of the potential hydrogen chloride emissions

$E_i$  = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

$E_o$  = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(d) *Capacity of a municipal waste combustion unit.* For a municipal waste combustion unit that can operate continuously for 24-hour periods, calculate the municipal waste combustion unit capacity based on 24 hours of operation at the maximum charge rate. To determine the maximum charge rate, use one of two methods:

(1) For municipal waste combustion units with a design based on heat input capacity, calculate the maximum charging rate based on the maximum heat input capacity and one of two heating values:

(i) If your municipal waste combustion unit combusts refuse-derived fuel, use a heating value of 12,800 kilojoules per kilogram (5,500 British thermal units per pound).

(ii) If your municipal waste combustion unit combusts municipal solid waste, use a heating value of 10,500 kilojoules per kilogram (4,500 British thermal units per pound).

(2) For municipal waste combustion units with a design not based on heat input capacity, use the maximum designed charging rate.

(e) *Capacity of a batch municipal waste combustion unit.* Calculate the capacity of a batch municipal waste combustion unit as the maximum design amount of municipal solid waste they can charge per batch multiplied by the maximum number of batches they can process in 24 hours. Calculate the maximum number of batches by dividing 24 by the number of hours needed to process one batch. Retain fractional batches in the calculation. For example, if one batch requires 16 hours, the municipal waste combustion unit can combust 24/16, or 1.5 batches, in 24 hours.

(f) *Quarterly carbon usage.* If you use activated carbon to comply with the dioxins/furans or mercury limits, calculate the required quarterly usage of carbon using equation 4 of this section for plant basis or equation 5 of this section for unit basis:

(1) Plant basis.

$$C = \sum_{i=1}^n f_i * h_i \quad (\text{Eq. 4})$$

Where:

C = required quarterly carbon usage for the plant in kilograms (or pounds).  
 $f_i$  = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).  
 $h_i$  = number of hours the municipal waste combustion unit was in

operation during the calendar quarter (hours).

n = number of municipal waste combustion units, i, located at your plant.

(2) Unit basis.

$$C = f * h \quad (\text{Eq. 5})$$

Where:

C = required quarterly carbon usage for the unit in kilograms (or pounds).

f = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

h = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

## Definitions

### § 60.1465 What definitions must I know?

Terms used but not defined in this section are defined in the CAA and in subparts A and B of this part.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or the Administrator of a State Air Pollution Control Agency.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

*Batch municipal waste combustion unit* means a municipal waste combustion unit designed so it cannot combust municipal solid waste continuously 24 hours per day because the design does not allow waste to be fed to the unit or ash to be removed during combustion.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 (or 366 consecutive days for leap years) consecutive days starting on January 1 and ending on December 31.

*Chief facility operator* means the person in direct charge and control of the operation of a municipal waste combustion unit. That person is responsible for daily onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit.

*Class I units* mean small municipal waste combustion units subject to this

subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See the definition in this section of "municipal waste combustion plant capacity" for specification of which units at a plant site are included in the aggregate capacity calculation.

*Class II units* mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See the definition in this section of "municipal waste combustion plant capacity" for specification of which units at a plant site are included in the aggregate capacity calculation.

*Clean wood* means untreated wood or untreated wood products including clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include two items:

(1) "Yard waste," which is defined elsewhere in this section.

(2) Construction, renovation, or demolition wastes (for example, railroad ties and telephone poles) that are exempt from the definition of "municipal solid waste" in this section.

*Co-fired combustion unit* means a unit that combusts municipal solid waste with nonmunicipal solid waste fuel (for example, coal, industrial process waste). To be considered a co-fired combustion unit, the unit must be subject to a federally enforceable permit that limits it to combusting a fuel feed stream which is 30 percent or less (by weight) municipal solid waste as measured each calendar quarter.

*Continuous burning* means the continuous, semicontinuous, or batch feeding of municipal solid waste to dispose of the waste, produce energy, or provide heat to the combustion system in preparation for waste disposal or energy production. Continuous burning does not mean the use of municipal solid waste solely to thermally protect the grate or hearth during the startup period when municipal solid waste is not fed to the grate or hearth.

*Continuous emission monitoring system* means a monitoring system that continuously measures the emissions of a pollutant from a municipal waste combustion unit.

*Dioxins/furans* mean tetra- through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Eight-hour block average* means the average of all hourly emission concentrations or parameter levels when

the municipal waste combustion unit operates and combusts municipal solid waste measured over any of three 8-hour periods of time:

- (1) 12:00 midnight to 8:00 a.m.
- (2) 8:00 a.m. to 4:00 p.m.
- (3) 4:00 p.m. to 12:00 midnight.

*Federally enforceable* means all limits and conditions the Administrator can enforce (including the requirements of 40 CFR parts 60, 61, and 63), requirements in a State's implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*First calendar half* means the period that starts on January 1 and ends on June 30 in any year.

*Fluidized bed combustion unit* means a unit where municipal waste is combusted in a fluidized bed of material. The fluidized bed material may remain in the primary combustion zone or may be carried out of the primary combustion zone and returned through a recirculation loop.

*Four-hour block average or 4-hour block average* means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of six 4-hour periods:

- (1) 12:00 midnight to 4:00 a.m.
- (2) 4:00 a.m. to 8:00 a.m.
- (3) 8:00 a.m. to 12:00 noon.
- (4) 12:00 noon to 4:00 p.m.
- (5) 4:00 p.m. to 8:00 p.m.
- (6) 8:00 p.m. to 12:00 midnight.

*Mass burn refractory municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a refractory wall furnace. Unless otherwise specified, that includes municipal waste combustion units with a cylindrical rotary refractory wall furnace.

*Mass burn rotary waterwall municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a cylindrical rotary waterwall furnace.

*Mass burn waterwall municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a waterwall furnace.

*Materials separation plan* means a plan that identifies a goal and an approach for separating certain components of municipal solid waste for a given service area in order to make the separated materials available for recycling. A materials separation plan may include three items:

(1) Elements such as dropoff facilities, buy-back or deposit-return incentives, curbside pickup programs, or centralized mechanical separation systems.

(2) Different goals or approaches for different subareas in the service area.

(3) No materials separation activities for certain subareas or, if warranted, the entire service area.

*Maximum demonstrated load of a municipal waste combustion unit* means the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxins/furans stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in this subpart.

*Maximum demonstrated temperature of the particulate matter control device* means the highest 4-hour block arithmetic average flue gas temperature measured at the inlet of the particulate matter control device during 4 consecutive hours in the course of the most recent stack test for dioxins/furans emissions that demonstrates compliance with the limits specified in this subpart.

*Medical/infectious waste* means any waste meeting the definition of "medical/infectious waste" in § 60.51c of subpart E, of this part.

*Mixed fuel-fired (pulverized coal/refuse-derived fuel) combustion unit* means a combustion unit that combusts coal and refuse-derived fuel simultaneously, in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the unit where it is combusted in suspension. That includes both conventional pulverized coal and micropulverized coal.

*Modification or modified municipal waste combustion unit* means a municipal waste combustion unit you have changed after June 6, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the unit (not including the cost of land) updated to current costs.

(2) Any physical change in the municipal waste combustion unit or change in the method of operating it that increases the emission level of any air pollutant for which new source performance standards have been established under section 129 or section 111 of the CAA. Increases in the emission level of any air pollutant are determined when the municipal waste combustion unit operates at 100 percent of its physical load capability and are measured downstream of all air

pollution control devices. Load restrictions based on permits or other nonphysical operational restrictions cannot be considered in the determination.

*Modular excess-air municipal waste combustion unit* means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers, all of which are designed to operate at conditions with combustion air amounts in excess of theoretical air requirements.

*Modular starved-air municipal waste combustion unit* means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers in which the primary combustion chamber is designed to operate at substoichiometric conditions.

*Municipal solid waste or municipal-type solid waste* means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

*Municipal waste combustion plant* means one or more municipal waste combustion units at the same location as specified under Applicability (§ 60.1015(a) and (b)).

*Municipal waste combustion plant capacity* means the aggregate municipal waste combustion capacity of all municipal waste combustion units at the plant that are subject to subparts Ea or Eb of this part, or this subpart.

*Municipal waste combustion unit* means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected combustion



units (with or without heat recovery), modular combustion units (starved-air or excess-air), boilers (for example, steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. Two criteria further define municipal waste combustion units:

(1) Municipal waste combustion units do not include pyrolysis or combustion units located at a plastics or rubber recycling unit as specified under Applicability (§ 60.1020(h) and (i)). Municipal waste combustion units also do not include cement kilns that combust municipal solid waste as specified under Applicability (§ 60.1020(j)). Municipal waste combustion units also do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

(2) The boundaries of a municipal waste combustion unit are defined as follows. The municipal waste combustion unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustion unit water system. The municipal waste combustion unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine-generator set. The municipal waste combustion unit boundary starts at the municipal solid waste pit or hopper and extends through three areas:

(i) The combustion unit flue gas system, which ends immediately after the heat recovery equipment or, if there is no heat recovery equipment, immediately after the combustion chamber.

(ii) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. It includes all ash handling systems connected to the bottom ash handling system.

(iii) The combustion unit water system, which starts at the feed water pump and ends at the piping that exits the steam drum or superheater.

*Particulate matter* means total particulate matter emitted from municipal waste combustion units as measured using EPA Reference Method 5 in appendix A of this part and the procedures specified in § 60.1300.

*Plastics or rubber recycling unit* means an integrated processing unit for which plastics, rubber, or rubber tires are the only feed materials (incidental contaminants may be in the feed

materials). The feed materials are processed and marketed to become input feed stock for chemical plants or petroleum refineries. The following three criteria further define a plastics or rubber recycling unit:

(1) Each calendar quarter, the combined weight of the feed stock that a plastics or rubber recycling unit produces must be more than 70 percent of the combined weight of the plastics, rubber, and rubber tires that recycling unit processes.

(2) The plastics, rubber, or rubber tires fed to the recycling unit may originate from separating or diverting plastics, rubber, or rubber tires from municipal or industrial solid waste. The feed materials may include manufacturing scraps, trimmings, and off-specification plastics, rubber, and rubber tire discards.

(3) The plastics, rubber, and rubber tires fed to the recycling unit may contain incidental contaminants (for example, paper labels on plastic bottles or metal rings on plastic bottle caps).

*Potential hydrogen chloride emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

*Potential mercury emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without controls for mercury emissions.

*Potential sulfur dioxide emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

*Pyrolysis/combustion unit* means a unit that produces gases, liquids, or solids by heating municipal solid waste. The gases, liquids, or solids produced are combusted and the emissions vented to the atmosphere.

*Reconstruction* means rebuilding a municipal waste combustion unit and meeting two criteria:

(1) The reconstruction begins after June 6, 2001.

(2) The cumulative cost of the construction over the life of the unit exceeds 50 percent of the original cost of building and installing the municipal waste combustion unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the municipal waste combustion unit used to calculate those costs, see the definition in this section of "municipal waste combustion unit."

*Refractory unit or refractory wall furnace* means a municipal waste

combustion unit that has no energy recovery (such as through a waterwall) in the furnace of the municipal waste combustion unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. That includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

*Same location* means the same or contiguous properties under common ownership or control, including those separated only by a street, road, highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or any combination thereof. Entities may include a municipality, other governmental unit, or any quasi-governmental authority (for example, a public utility district or regional authority for waste disposal).

*Second calendar half* means the period that starts on July 1 and ends on December 31 in any year.

*Shift supervisor* means the person who is in direct charge and control of operating a municipal waste combustion unit and who is responsible for onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit during an assigned shift.

*Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel) combustion unit* means a municipal waste combustion unit that combusts coal and refuse-derived fuel simultaneously, in which coal is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

*Standard conditions* when referring to units of measure mean a temperature of 20 °C and a pressure of 101.3 kilopascals.

*Startup period* means the period when a municipal waste combustion unit begins the continuous combustion of municipal solid waste. It does not include any warmup period during which the municipal waste combustion unit combusts fossil fuel or other solid waste fuel but receives no municipal solid waste.

*Stoker (refuse-derived fuel) combustion unit* means a steam generating unit that combusts refuse-derived fuel in a semisuspension



combusting mode, using air-fed distributors.

*Total mass dioxins/furans or total mass* means the total mass of tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans as determined using EPA Reference Method 23 in appendix A of this part and the procedures specified in § 60.1300.

*Twenty-four hour daily average or 24-hour daily average* means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the municipal waste combustion unit operates and combusts municipal solid waste

measured during the 24 hours between 12:00 midnight and the following midnight.

*Untreated lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

*Waterwall furnace* means a municipal waste combustion unit that has energy (heat) recovery in the furnace (for

example, radiant heat transfer section) of the combustion unit.

*Yard waste* means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(1) Construction, renovation, and demolition wastes that are exempt from the definition of "municipal solid waste" in this section.

(2) Clean wood that is exempt from the definition of "municipal solid waste" in this section.

### Tables

TABLE 1 OF SUBPART AAAA—EMISSION LIMITS FOR NEW SMALL MUNICIPAL WASTE COMBUSTION UNITS

For the following pollutants	You must meet the following emission limits <sup>a</sup>	Using the following averaging times	And determine compliance by the following methods
1. Organics Dioxins/Furans (total mass basis).	13 nanograms per dry standard cubic meter.	3-run average (minimum run duration is 4 hours).	Stack test.
2. Metals:			
Cadmium .....	0.020 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Lead .....	0.20 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Mercury .....	0.080 milligrams per dry standard cubic meter or 85 percent reduction of potential mercury emissions.	3-run average (run duration specified in test method).	Stack test.
Opacity .....	10 percent .....	Thirty 6-minute averages .....	Stack test.
Particulate Matter	24 milligrams per dry standard cubic meter	3-run average (run duration specified in test method).	Stack test.
3. Acid Gases:			
Hydrogen Chloride	25 parts per million by dry volume or 95 percent reduction of potential hydrogen chloride emissions.	3-run average (minimum run duration is 1 hour).	Stack test
Nitrogen Oxides (Class I units) <sup>b</sup> .	150 (180 for 1st year of operation) parts per million by dry volume.	24-hour daily block arithmetic average concentration.	Continuous emission monitoring system.
Nitrogen Oxides (Class II units) <sup>c</sup> .	500 parts per million by dry volume .....	See footnote <sup>d</sup> .....	See footnote <sup>d</sup>
Sulfur Dioxide .....	30 parts per million by dry volume or 80 percent reduction of potential sulfur dioxide emissions.	24-hour daily block geometric average concentration or percent reduction.	Continuous monitoring emission system.
4. Other:			
Fugitive Ash .....	Visible emissions for no more than 5 percent of hourly observation period.	Three 1-hour observation periods .....	Visible emission test.

<sup>a</sup> All emission limits (except for opacity) are measured at 7 percent oxygen.

<sup>b</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity more than 250 tons per day of municipal solid waste. See § 60.1465 for definitions.

<sup>c</sup> Class II units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity no more than 250 tons per day of municipal solid waste. See § 60.1465 for definitions.

<sup>d</sup> No monitoring, testing, recordkeeping, or reporting is required to demonstrate compliance with the nitrogen oxides limit for Class II units.

TABLE 2 OF SUBPART AAAA—CARBON MONOXIDE EMISSION LIMITS FOR NEW SMALL MUNICIPAL WASTE COMBUSTION UNITS

For the following municipal waste combustion units	You must meet the following carbon monoxide limits <sup>a</sup>	Using the following averaging times <sup>b</sup>
1. Fluidized-bed .....	100 parts per million by dry volume .....	4-hour.
2. Fluidized bed, mixed fuel, (wood/refuse-derived fuel) .....	200 parts per million by dry volume .....	24-hour. <sup>c</sup>
3. Mass burn rotary refractory .....	100 parts per million by dry volume .....	4-hour.

TABLE 2 OF SUBPART AAAA—CARBON MONOXIDE EMISSION LIMITS FOR NEW SMALL MUNICIPAL WASTE COMBUSTION UNITS—Continued

For the following municipal waste combustion units	You must meet the following carbon monoxide limits <sup>a</sup>	Using the following averaging times <sup>b</sup>
4. Mass burn rotary waterwall .....	100 parts per million by dry volume .....	24-hour.
5. Mass burn waterwall and refractory .....	100 parts per million by dry volume .....	4-hour.
6. Mixed fuel-fired (pulverized coal/refuse-derived fuel) .....	150 parts per million by dry volume .....	4-hour.
7. Modular starved-air and excess air .....	50 parts per million by dry volume .....	4-hour.
8. Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel).	150 parts per million by dry volume .....	24-hour daily.
9. Stoker, refuse-derived fuel .....	150 parts per million by dry volume .....	24-hour daily.

<sup>a</sup> All limits (except for opacity) are measured at 7 percent oxygen. Compliance is determined by continuous emission monitoring systems.

<sup>b</sup> Block averages, arithmetic mean. See § 60.1465 for definitions.

<sup>c</sup> 24-hour block average, geometric mean. See § 60.1465 for definitions.

TABLE 3 OF SUBPART AAAA—REQUIREMENTS FOR VALIDATING CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following continuous emission monitoring systems	Use the following methods in appendix A of this part to validate pollutant concentration levels	Use the following methods in appendix A of this part to measure oxygen (or carbon dioxide)
1. Nitrogen Oxides (Class I units only) <sup>a</sup> .....	Method 7, 7A, 7B, 7C, 7D, or 7E .....	Method 3 or 3A.
2. Sulfur Dioxide .....	Method 6 or 6C .....	Method 3 or 3A.
3. Carbon Monoxide .....	Method 10, 10A, or 10B .....	Method 3 or 3A.

<sup>a</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity more than 250 tons per day of municipal solid waste. See § 60.1465 for definitions.

TABLE 4 OF SUBPART AAAA—REQUIREMENTS FOR CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following pollutants	Use the following span values for your CEMS	Use the following performance specifications in appendix B of this part for your CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of this part to collect data
1. Opacity .....	100 percent opacity .....	P.S. 1	Method 9.
2. Nitrogen Oxides (Class I units only) <sup>a</sup> .....	Control device outlet: 125 percent of the maximum expected hourly potential nitrogen oxides emissions of the municipal waste combustion unit.	P.S. 2	Method 7E.
3. Sulfur Dioxide .....	Inlet to control device: 125 percent of the maximum expected sulfur dioxide emissions of the municipal waste combustion unit. Control device outlet: 50 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit.	P.S. 2	Method 6C.
4. Carbon Monoxide .....	125 percent of the maximum expected hourly potential carbon with monoxide emissions of the municipal waste combustion unit.	P.S. 4A	Method 10 alternative interference trap.
5. Oxygen or Carbon Dioxide .....	25 percent oxygen or 25 percent carbon dioxide .....	P.S. 3	Method 3A or 3B.

<sup>a</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity more than 250 tons per day of municipal solid waste. See § 60.1465 for definitions.

TABLE 5 OF SUBPART AAAA—REQUIREMENTS FOR STACK TESTS

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
1. Organics: Dioxins/Furans .....	Method 1 .....	Method 23 <sup>a</sup> .....	The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load.
2. Metals: Cadmium .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Lead .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.

TABLE 5 OF SUBPART AAAA—REQUIREMENTS FOR STACK TESTS—Continued

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
Mercury .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Opacity .....	Method 9 .....	Method 9 .....	Use Method 9 to determine compliance with opacity limit. 3-hour observation period (thirty 6-minute averages).
Particulate Matter .....	Method 1 .....	Method 5 <sup>a</sup> .....	The minimum sample Matter volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160 ±14°C. The minimum sampling time is 1 hour.
3. Acid Gases: <sup>b</sup> Hydrogen Chloride .....	Method 1 .....	Method 26 or 26A <sup>a</sup> .....	Test runs must be at least 1 hour long while the municipal waste combustion unit is operating at full load.
4. Other: <sup>b</sup> Fugitive Ash .....	Not applicable .....	Method 22 (visible emissions).	The three 1-hour observation period must include periods when the facility transfers fugitive ash from the municipal waste combustion unit to the area where the fugitive ash is stored or loaded into containers or trucks.

<sup>a</sup> Must simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B in appendix A of this part.

<sup>b</sup> Use CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for quality assurance requirements in Appendix F of this part.

[FR Doc. 00-30003 Filed 12-5-00; 8:45 am]

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# Federal Register

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**Wednesday,  
December 6, 2000**

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## **Part III**

## **Environmental Protection Agency**

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**40 CFR Part 60**

**Emission Guidelines for Existing Small  
Municipal Waste Combustion Units; Final  
Rule**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 60**

[AD-FRL-6899-5]

RIN 2060-AI51

**Emission Guidelines for Existing Small Municipal Waste Combustion Units****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** This action reestablishes emission guidelines for existing small municipal waste combustion (MWC) units. The emission guidelines contain stringent emission limits for organics (dioxins/furans), metals (cadmium, lead, mercury, and particulate matter), and acid gases (hydrogen chloride, sulfur dioxide, and nitrogen oxides). Some of those pollutants can cause toxic effects such as eye, nose, throat, and skin irritation, and blood cell, heart, liver, and kidney damage. Emission guidelines for small MWC units were originally promulgated in December 1995, but were vacated by the U.S. Court of Appeals for the District of Columbia Circuit in March 1997. In response to the 1997 vacature, on August 30, 1999, EPA proposed to reestablish emission guidelines for small MWC units. The emission guidelines contained in this final rule are equivalent to the 1995 emission guidelines for small MWC units.

**DATES:** *Effective date.* February 5, 2001.

The incorporation by reference of certain publications listed in this rule are approved by the Director of the Office of the Federal Register as of February 5, 2001.

**Applicability date.** The emission guidelines apply to small MWC units that commenced construction on or before August 30, 1999.

**ADDRESSES:** Docket No. A-98-18 and associated Docket Nos. A-90-45 and A-89-08 contain supporting information for the emission guidelines. The dockets are available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, at EPA's Air and Radiation Docket and Information Center (Mail Code-6102), 401 M Street SW, Washington, DC 20460, or by calling (202) 260-7548. The dockets are located at the above address in Room M-1500, Waterside Mall (ground floor). A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Mr. Rick Copland at (919) 541-5265, Combustion Group, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, e-mail: copland.rick@epa.gov.

**SUPPLEMENTARY INFORMATION:****Public Comments**

Emission guidelines and companion new source performance standards (NSPS) for small MWC units were proposed on August 30, 1999 (64 FR 47276), and 48 comment letters were received on the proposals. Verbal comments were also received at the

October 5, 1999 public hearing. The comment letters and a transcript of the public hearing are available in Docket No. A-98-18. A summary of and responses to the public comments are contained in "Small Municipal Waste Combustors: Background Information Document for New Source Performance Standards and Emission Guidelines-Public Comments and Responses (EPA-453/R-00-001)." In response to the public comments, EPA adjusted the final emission guidelines where appropriate. A copy of the background information document is located in Docket No. A-98-18.

**World Wide Web**

Electronic versions of this action, the regulatory text, and other background information, including the response to comments document, are available at the Technology Transfer Network web site (TTN Web) that EPA has established for the emission guidelines for small MWC units: "http://www.epa.gov/ttn/uatw/129/mwc/rimwc2.html." For assistance in downloading files, call the EPA's TTN Web Help Line at (919) 541-5384.

**Regulated Entities**

No entities are directly regulated by this action because these are emission guidelines. Additional State or Federal action is required for implementation of the emission guidelines. However, adoption of State or Federal plans implementing the emission guidelines will affect the following categories of sources:

Category	NAICS codes	SIC codes	Examples of regulated entities
Industry, Federal government, and State/local/tribal governments.	562213, 92411	4953 9511	Solid waste combustors or incinerators at waste-to-energy facilities that generate electricity or steam from the combustion of garbage (typically municipal waste); and solid waste combustors or incinerators at facilities that combust garbage (typically municipal waste) and do not recover energy from the waste.

The above list is not intended to be exhaustive, but rather provides a guide regarding the entities EPA expects to be regulated by applicable State or Federal plans implementing the emission guidelines for small MWC units. Not all facilities classified under the NAICS and SIC codes will be affected. Other types of entities not listed could also be affected. To determine whether your facility will be regulated by State or Federal plans implementing the emission guidelines, carefully examine the applicability criteria in §§ 60.1550 through 60.1565 of the emission guidelines.

**Judicial Review**

Today's action of adopting a final rule for small MWC units constitutes final administrative action on the proposed emission guidelines for small MWC units. Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by February 5, 2001. Under section 307(d)(7)(B) of the CAA, only an objection to this final rule that was raised with reasonable specificity during the period for public comment

can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's final action may not be challenged separately in any civil or criminal proceeding brought by EPA to enforce the requirements.

**Organization of This Document**

The following outline is provided to aid in locating information in this preamble.

- I. Background Information
- II. Summary of the Emission Guidelines
  - A. Sources Regulated by the Emission Guidelines

- B. Subcategorization of the Small MWC Unit Population
- C. Pollutants Regulated by the Emission Guidelines
- D. Format of the Emission Limits
- E. Summary of the Emission Guidelines
- III. Changes to the Emission Guidelines
- IV. Impacts of the Emission Guidelines
  - A. Air Impacts
  - B. Cost and Economic Impacts
- V. Companion Rule for New Small MWC Units
- VI. Amendments to 40 CFR Part 60, Subpart B
- VII. Administrative Requirements
  - A. Executive Order 12866: Regulatory Planning and Review
  - B. Executive Order 13132: Federalism
  - C. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments
  - D. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
  - E. Unfunded Mandates Reform Act
  - F. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*
  - G. Paperwork Reduction Act
  - H. National Technology Transfer and Advancement Act
  - I. Congressional Review Act

#### Abbreviations and Acronyms Used in This Document

- ASME American Society of Mechanical Engineers
- CFR Code of Federal Regulations
- EIA Economic Impact Analysis
- EPA U.S. Environmental Protection Agency
- FR **Federal Register**
- ICR Information Collection Request
- kg/year Kilograms per year
- MACT Maximum achievable control technology
- Mg/year Megagrams per year
- MSW Municipal solid waste
- MWC Municipal waste combustion
- NAICS North American Industrial Classification System
- NSPS New source performance standards
- NTTAA National Technology Transfer and Advancement Act
- OAQPS Office of Air Quality Planning and Standards
- OMB Office of Management and Budget
- OP Office of Policy
- Pub. L. Public Law
- RFA Regulatory Flexibility Act
- SBREFA Small Business Regulatory Enforcement Fairness Act
- SIC Standard Industrial Classification
- TTN Technology Transfer Network
- UMRA Unfunded Mandates Reform Act
- U.S. United States
- U.S.C. United States Code

#### I. Background Information

On December 19, 1995, EPA promulgated emission guidelines for large and small MWC units under 40 CFR part 60, subpart Cb. The emission guidelines covered existing MWC units located at plants with an aggregate plant combustion capacity greater than 35

megagrams per day of municipal solid waste (MSW)(approximately 39 tons per day of MSW). The 1995 emission guidelines divided the MWC unit population into MWC units located at large MWC plants and MWC units located at small MWC plants. Plant size was based on the total aggregate capacity of all individual MWC units at a MWC plant.

Litigation followed the promulgation of the 1995 emission guidelines. In 1997, the U.S. Court of Appeals for the District of Columbia Circuit ruled that EPA must develop regulations for small MWC units (units with an individual MWC capacity of 250 tons per day or less) separately from regulations for large MWC units (units with an individual MWC unit capacity greater than 250 tons per day), indicating that the 1995 emission guidelines were not consistent with section 129 of the CAA. The court directed EPA to revise the 1995 emission guidelines so that they applied only to large MWC units, and the court vacated the 1995 emission guidelines as they applied to small MWC units. In response to the court ruling, EPA amended the 1995 emission guidelines on August 25, 1997 so that they applied only to existing large MWC units. Then, on August 30, 1999, EPA proposed emission guidelines for small MWC units with an individual unit capacity of 35 to 250 tons per day.

Today's final rule reestablishes emission guidelines for existing small MWC units with capacities of 35 to 250 tons per day of MSW under 40 CFR part 60, subpart BBBB.

#### II. Summary of the Emission Guidelines

The following summarizes the final emission guidelines for small MWC units, including identification of the subcategories used in the final emission guidelines. Overall, the emission guidelines for small MWC units are equivalent to the 1995 emission guidelines for small MWC units.

##### A. Sources Regulated by the Emission Guidelines

Today's emission guidelines do not directly regulate any MWC units, but they require States to develop plans to limit air emissions from existing small MWC units. In subpart BBBB and in associated State plans, the emission limits and requirements will apply to each existing small MWC unit that has a design combustion capacity of 35 to 250 tons per day of MSW and commenced construction on or before August 30, 1999. Small MWC units that commenced construction after August 30, 1999 are not covered under the emission guidelines (subpart BBBB).

Those units will be subject to the NSPS for new small MWC units (subpart AAAA) which are published separately in today's **Federal Register**.

##### B. Subcategorization of the Small MWC Unit Population

Within the emission guidelines, the small MWC unit population is subcategorized based on aggregate capacity of the plant where the individual small MWC unit is located. The resulting subcategories are as follows: Class I units are small MWC units located at plants with an aggregate plant capacity greater than 250 tons per day of MSW; Class II units are small MWC units located at plants with an aggregate plant capacity less than or equal to 250 tons per day of MSW.

##### C. Pollutants Regulated by the Emission Guidelines

Section 129 of the CAA requires EPA to establish numerical emission limits for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, sulfur dioxide, hydrogen chloride, nitrogen oxides, and carbon monoxide. Section 129 specifies that EPA may also:

\* \* \* promulgate numerical emission limitations or provide for the monitoring of post-combustion concentrations of surrogate substances, parameters, or periods of residence times in excess of stated temperatures with respect to pollutants other than those listed [above] \* \* \*.

Therefore, in addition to emission limits, EPA is establishing requirements for MWC unit operating load, flue gas temperature at the particulate matter control device inlet, and carbon feed rate as part of the good combustion practice requirements. The EPA is also establishing requirements for the control of fugitive ash emissions. All of those requirements were contained in the 1995 emission guidelines.

##### D. Format of the Emission Limits

The format of the emission limits is identical to the format of the emission limits in the 1995 emission guidelines: emission limits based on pollutant concentration. Alternative percentage reduction requirements are provided for mercury, sulfur dioxide, and hydrogen chloride. Opacity and fugitive ash requirements are the same as the 1995 emission guidelines. In addition to controlling stack emissions, the emission guidelines incorporate good combustion practice requirements (*i.e.*, operator training, operator certification, and MWC unit operating requirements).

### E. Summary of the Emission Guidelines

A concise summary of the emission guidelines can be found in Tables 2 through 4 of subpart BBBB.

### III. Changes to the Emission Guidelines

For the majority of small MWC units that will be subject to emission guideline requirements, the final emission guidelines are identical to the emission guidelines proposed in August 1999. However, one change made in the final emission guidelines affects requirements for about five MWC plants. That change is summarized in the following three paragraphs and is also discussed in the background information document described earlier under "Public Comments."

In the proposal, different emission limits were proposed for MWC units in Class A and Class B. Class A MWC units were nonrefractory MWC units located at MWC plants with an aggregate plant capacity greater than 250 tons per day. Class B MWC units were refractory units located at MWC plants with an aggregate plant capacity greater than 250 tons per day. The 1999 proposal included different emission limits for Class A and Class B units because it had been brought to EPA's attention that different flue gas flow rates per ton of MSW combusted were expected to occur at Class A and Class B units. The 1995 emission guidelines did not make the distinction in flue gas flow rates and treated Class A and Class B units as a combined class with the same requirements.

Some comments on the proposal indicated that the proposed subcategorization with different control requirements for Class A and Class B was appropriate. However, other comments on the proposal indicated that the technical bases for the Class A and Class B subcategorization was no longer valid for today's MWC units and the subcategory was inappropriate. The EPA reanalyzed the issue and has concluded that the flue gas flow rates for Class A and Class B MWC units are not significantly different. As a result, the Class A units and the Class B units are combined into a single Class I category in the final emission guidelines as had been done in the 1995 emission guidelines.

Maximum achievable control technology (MACT) floors were then calculated for the Class I units, and then new MACT limits were selected. Uniform emission limits now apply to all Class I MWC units. With the exception of nitrogen oxides, the final emission limits for Class I units are identical to the 1995 emission limits for

Class I units. The full set of final emission limits for Class I and Class II can be found in Tables 2, 3 and 4 of Subpart BBBB. See the background information document for a discussion of other comments on the proposed emission guidelines.

### IV. Impacts of the Emission Guidelines

The following describes the impacts (*i.e.*, air, water, solid waste, energy, cost, and economic impacts) of the emission guidelines for small MWC units. The impact analysis conducted to evaluate the 1995 emission guidelines still applies because the air pollution control requirements in the final emission guidelines are the same as the 1995 emission guidelines. The 1995 analysis is available at 59 FR 48228. The discussion in this preamble focuses only on the air, cost, and economic impacts of the final emission guidelines.

As discussed in the preamble for the 1995 emission guidelines, EPA determined that the water, solid waste, and energy impacts associated with the emission guidelines were not significant. Today's action affects only a subset of the MWC units that were addressed in the earlier impact analysis. Accordingly, EPA has concluded that the water, solid waste, and energy impacts associated with today's action are not significant.

For further information on the impacts of the emission guidelines, refer to "Economic Impact Analysis (EIA): Small Municipal Waste Combustion Units—Emission Guidelines and New Source Performance Standards" March 2000 (EPA-452/R-00-001).

#### A. Air Impacts

As discussed in the EIA, the EPA estimates that 90 small MWC units operating at 41 plants will be affected by the emission guidelines. The total MSW combustion capacity of the 90 units was 8,551 tons per day in 1998.

Table 1 of this preamble presents the national air emission reductions for existing small MWC units that will result from full implementation of the emission guidelines compared to 1998 baseline levels without the emission guidelines.

TABLE 1.—NATIONAL AIR EMISSION IMPACTS OF THE EMISSION GUIDELINES FOR SMALL MWC UNITS

Pollutant	Air emissions reduction	Emission level <sup>a</sup>
Dioxins/ Furans <sup>b</sup>	2.7 kg/year .....	97
Cadmium .....	310 kg/year .....	85
Lead .....	12.9 Mg/year ....	92
Mercury .....	4.1 Mg/year .....	95

TABLE 1.—NATIONAL AIR EMISSION IMPACTS OF THE EMISSION GUIDELINES FOR SMALL MWC UNITS—Continued

Pollutant	Air emissions reduction	Emission level <sup>a</sup>
Particulate Matter.	369 Mg/year .....	77
Sulfur Dioxide	1,368 Mg/year ..	56
Hydrogen Chloride.	2,456 Mg/year ..	88
Nitrogen Oxides.	384 Mg/year .....	9

<sup>a</sup>Percent reduction from 1998 baseline.

<sup>b</sup>Percent national emission reduction relative to national baseline emissions that would occur in the absence of the emission guidelines.

<sup>c</sup>Total mass of tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

#### B. Cost and Economic Impacts

To estimate the costs of the emission guidelines, EPA has taken into account all of the existing air pollution control equipment currently in operation at small MWC units. The cost estimates presented here are incremental costs over the control equipment already in use. For more details on the cost and economic analysis, refer to the EIA.

The total annual cost (including annualized capital and operating costs) of the final emission guidelines would be approximately \$68 million, which is equivalent to \$25.30 per ton of MSW combusted.

### V. Companion Rule for New Small MWC Units

A companion rule to reestablish NSPS for new small MWC units is being published separately in today's **Federal Register**. The NSPS for new small MWC units are contained in 40 CFR part 60, subpart AAAA.

### VI. Amendments to 40 CFR Part 60, Subpart B

Also included in today's **Federal Register** is a rule to amend subpart B of part 60, "Adoption and Submittal of State Plans for Designated Facilities." The EPA proposed two amendments to subpart B, which are fully described in the proposal to reestablish emission guidelines for small MWC units (64 FR 47241). The EPA received no comments on the amendments to subpart B; therefore, the amendments are being promulgated as proposed.

### VII. Administrative Requirements

#### A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action

is "significant," and, therefore, subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to lead to a rule that may:

(1) Have an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, EPA has determined that this final rule is not a "significant regulatory action" and, therefore, is not subject to OMB review. The EPA submitted the 1995 rulemaking package (which included requirements for new and existing large MWC units and requirements for new and existing small MWC units) to OMB for review (60 FR 65405, December 19, 1995) and OMB approved the rulemaking package for adoption. The emission guidelines promulgated today only apply to small MWC units and are projected to have an impact of approximately \$68 million annually.

#### *B. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and

local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law, unless EPA consults with State and local officials early in the process of developing the proposed regulation.

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because State plans are used to implement the rule. Thus, the requirements of section 6 of the Executive Order do not apply to this final rule. Although section 6 of Executive Order 13132 does not apply to this final rule, EPA did consult with State and local officials in developing this final rule. A list of those consultations is provided in the preamble to the 1995 emission guidelines (60 FR 65405-65412, December 19, 1995).

#### *C. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments*

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's final rule does not significantly or uniquely affect the communities of Indian tribal governments. The EPA is not aware of any small MWC units located in Indian

territory. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this final rule.

#### *D. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866. Further, it is based on technology performance and not on health and safety risks.

#### *E. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, or tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, or tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year. Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final



rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the emission guidelines do not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, or tribal governments, in the aggregate, or the private sector in any 1 year. The EIA shows that the total annual costs of the emission guidelines is about \$68 million per year, starting on the 5th year after the rule is promulgated. Thus, today's emission guidelines are not subject to the requirements of sections 202 and 205 of the UMRA. Although the emission guidelines are not subject to UMRA, EPA prepared a cost-benefit analysis under section 202 of the UMRA for the 1995 emission guidelines. For a discussion of how EPA complied with the UMRA for the 1995 emission guidelines, including its extensive consultations with State and local governments, see the preamble to the 1995 emission guidelines. Because today's final emission guidelines are equivalent to the 1995 emission guidelines, no additional consultations were necessary.

*F. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.*

The RFA generally requires Federal agencies to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's final rule on small entities, a small entity is defined as: (1) A small business in the regulated industry that has a gross annual revenue less than \$6 million; (2) a small governmental

jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has determined that this action will not have a significant economic impact on a substantial number of small entities. The EPA has determined in a regulatory flexibility analysis that eight existing small MWC units (operated by one small business and seven small governments) that would be subject to the emission guidelines are considered "small entities" according to the Small Business Administration's definitions for the affected industries. Also in the initial analysis, EPA calculated compliance costs as a percentage of sales for business and a percentage of income (total household income) for the relevant population of owning governments for the MWC units that are considered small entities. The estimated annual compliance cost as a percentage of income is 0.03 percent for the seven small potentially affected government entities and 39 percent for the one small business. For the seven potentially affected government entities, the maximum compliance cost was 0.25 percent. None of the governmental impacts are considered significant. The impact on the one small business is considered significant but one small business is not a substantial number of entities.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA has tried to reduce the impact of this final rule on small entities by establishing different requirements for Class I and Class II MWC units and establishing provisions for less frequent testing for Class II MWC units. In addition, EPA involved representatives of small entities in the development of the emission guidelines.

*G. Paperwork Reduction Act*

The OMB has approved the information collection requirements in the emission guidelines under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060-0424.

The information will be used to ensure that the small MWC unit requirements are implemented properly and are complied with on a continuous basis. Records and reports are necessary to identify small MWC units that might

not be in compliance with the emission guidelines. Based on reported information, the implementing agency will decide which small MWC units should be inspected and what records or processes should be inspected. Records that owners and operators of small MWC units maintain indicate whether personnel are operating and maintaining control equipment properly.

The recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to EPA policies in 40 CFR part 2, subpart B, Confidentiality of Business Information.

The emission guidelines are projected to affect approximately 90 small MWC units located at 41 plants. The estimated average annual burden for industry for the first 3 years after promulgation of the emission guidelines would be 1,297 person-hours annually. There will be no capital costs for monitoring or recordkeeping during the first 3 years. The estimated average annual burden, over the first 3 years, for the implementing agency would be 773 hours with a cost of \$30,869 (including travel expenses) per year.

Burden means total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. That includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. The EPA is amending the table in 40 CFR part 9 of currently approved information collection request (ICR) control numbers issued by OMB for various regulations to list the information collection requirements contained in this final rule.

### H. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113, section 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, explanations when EPA decides not to use available and applicable voluntary consensus standards.

Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards applicable to the small MWC emission guidelines that could be used in process and emissions monitoring. The search for emissions monitoring procedures identified 29 voluntary consensus standards that initially appeared to have possible use in lieu of EPA standard reference methods. After reviewing the available standards, EPA determined that 21 of the candidate consensus standards identified for measuring emissions or surrogates subject to emission standards in the final rule would not be practical due to lack of equivalency, documentation, validation data and other important technical and policy considerations. The seven remaining candidate consensus standards are under development or currently under EPA review. The EPA plans to follow, review and consider adopting those standards after their development and further review by EPA is completed.

One consensus standard, American Society for Testing and Materials (ASTM) D6216-98, is practical for EPA use in EPA Performance Specification 1 (PS-1) (40 CFR part 60, appendix B). The ASTM D6216 can best be used in place of the design specification verification procedures currently in sections 5 and 6 of PS-1. On September 23, 1998, EPA proposed incorporating by reference ASTM D6216-98 under a separate rulemaking (63 FR 50824). Comments from the proposal have been addressed, and EPA expects to complete that action in the near future. For the above reasons, EPA does not in this final rulemaking adopt ASTM D6216-98 in lieu of PS-1 requirements as it would

be impractical for EPA to act independently from another rulemaking activity already undergoing promulgation, and because ASTM D6216 does not address all of the requirements specified in PS-1.

The EPA also conducted searches to identify voluntary consensus standards for process monitoring and process operation. Candidate voluntary consensus standards for process monitoring and process operation were identified for MWC unit load level (steam output); designing, constructing, installing, calibrating, and using nozzles and orifices; and MWC plant operator certification requirements.

One consensus standard by the American Society of Mechanical Engineers (ASME) was identified for potential use in this final rule for the measurement of MWC unit load level (steam output). The EPA believes the standard is practical to use in this final rule as the method to measure MWC unit load. The EPA has already incorporated by reference "ASME Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)" in 40 CFR 60.17(h)(3).

A second consensus standard by ASME was identified for potential use in this final rule for designing, constructing, installing, calibrating, and using nozzles and orifices. The EPA believes the standard is practical to use for the design, construction, installation, calibration, and use of nozzles and orifices. The EPA has already incorporated by reference "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971)" in 40 CFR 60.17(h)(3).

A third consensus standard by ASME (QRO-1-1994) was identified for potential use in this final rule for MWC plant operator certification requirements instead of developing new operator certification procedures. The EPA believes the standard is practical to use in the emission guidelines that require a chief facility operator and shift supervisor to successfully complete the operator certification procedures developed by ASME. The EPA has already incorporated by reference (QRO-1-1994) in 40 CFR 60.17(h)(1).

Tables 5, 6 and 7 of subpart BBBB list the EPA testing methods and performance standards included in this final rule. Most of the standards have been used by States and industry for more than 10 years. Nevertheless, under § 60.8 of subpart A of part 60, the standard also allows any State or source to apply to EPA for permission to use

alternative methods in place of any of the EPA testing methods or performance standards listed in the final rule.

### I. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This final rule will be effective February 5, 2001.

### List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Municipal waste combustion, Reporting and recordkeeping requirements.

Dated: November 3, 2000.

**Carol M. Browner,**  
Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 60 of the Code of Federal Regulations is amended as follows:

### PART 60—[AMENDED]

1. The authority citation for part 60 continues to read as follows:

**Authority:** 42 U.S.C. 7401-7601.

### Subpart A—General Provisions

2. Section 60.17 is amended by revising paragraphs (h)(1), (h)(2) and (h)(3) to read as follows:

#### § 60.17 Incorporations by reference.

\* \* \* \* \*

(h) \* \* \*

(1) ASME QRO-1-1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for §§ 60.56a, 60.54b(a), 60.54b(b), 60.1675(a), and 60.1675(c)(2).

(2) ASME PTC 4.1-1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for §§ 60.46b, 60.58a(h)(6)(ii), 60.58b(i)(6)(ii), and 60.1810(a)(3).

(3) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for §§ 60.58a(h)(6)(ii), 60.58b(i)(6)(ii), and 60.1810(a)(4).

\* \* \* \* \*

### Subpart B—Adoption and Submittal of State Plans for Designated Facilities

3. Section 60.24 is amended by revising paragraph (e)(1) to read as follows:

#### § 60.24 Emission standards and compliance schedules.

\* \* \* \* \*

(e)(1) Any compliance schedule extending more than 12 months from the date required for submittal of the plan must include legally enforceable increments of progress to achieve compliance for each designated facility or category of facilities. Unless otherwise specified in the applicable subpart, increments of progress must include, where practicable, each increment of progress specified in § 60.21(h) and must include such additional increments of progress as may be necessary to permit close and effective supervision of progress toward final compliance.

\* \* \* \* \*

4. Section 60.27 is amended by revising paragraph (f) to read as follows:

#### § 60.27 Actions by the Administrator.

\* \* \* \* \*

(f) Prior to promulgation of a plan under paragraph (d) of this section, the Administrator will provide the opportunity for at least one public hearing in either:

(1) Each State that failed to hold a public hearing as required by § 60.23(c); or

(2) Washington, DC or an alternate location specified in the **Federal Register**.

4. Part 60 is amended by adding a new subpart BBBB to read as follows:

### Subpart BBBB—Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999

#### Introduction

Sec.

60.1500 What is the purpose of this subpart?

60.1505 Am I affected by this subpart?

60.1510 Is a State plan required for all States?

60.1515 What must I include in my State plan?

60.1520 Is there an approval process for my State plan?

60.1525 What if my State plan is not approvable?

60.1530 Is there an approval process for a negative declaration letter?

60.1535 What compliance schedule must I include in my State plan?

60.1540 Are there any State plan requirements for this subpart that supersede the requirements specified in subpart B?

60.1545 Does this subpart directly affect municipal waste combustion unit owners and operators in my State?

#### Applicability of State Plans

60.1550 What municipal waste combustion units must I address in my State plan?

60.1555 Are any small municipal waste combustion units exempt from my State plan?

60.1560 Can an affected municipal waste combustion unit reduce its capacity to less than 35 tons per day rather than comply with my State plan?

60.1565 What subcategories of small municipal waste combustion units must I include in my State plan?

#### Use of Model Rule

60.1570 What is the “model rule” in this subpart?

60.1575 How does the model rule relate to the required elements of my State plan?

60.1580 What are the principal components of the model rule?

#### Model Rule—Increments of Progress

60.1585 What are my requirements for meeting increments of progress and achieving final compliance?

60.1590 When must I complete each increment of progress?

60.1595 What must I include in the notifications of achievement of my increments of progress?

60.1600 When must I submit the notifications of achievement of increments of progress?

60.1605 What if I do not meet an increment of progress?

60.1610 How do I comply with the increment of progress for submittal of a control plan?

60.1615 How do I comply with the increment of progress for awarding contracts?

60.1620 How do I comply with the increment of progress for initiating onsite construction?

60.1625 How do I comply with the increment of progress for completing onsite construction?

60.1630 How do I comply with the increment of progress for achieving final compliance?

60.1635 What must I do if I close my municipal waste combustion unit and then restart my municipal waste combustion unit?

60.1640 What must I do if I plan to permanently close my municipal waste combustion unit and not restart it?

#### Model Rule—Good Combustion Practices: Operator Training

60.1645 What types of training must I do?

60.1650 Who must complete the operator training course? By when?

60.1655 Who must complete the plant-specific training course?

60.1660 What plant-specific training must I provide?

60.1665 What information must I include in the plant-specific operating manual?

60.1670 Where must I keep the plant-specific operating manual?

#### Model Rule—Good Combustion Practices: Operator Certification

60.1675 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?

60.1680 After the required date for operator certification, who may operate the municipal waste combustion unit?

60.1685 What if all the certified operators must be temporarily offline?

#### Model Rule—Good Combustion Practices: Operating Requirements

60.1690 What are the operating practice requirements for my municipal waste combustion unit?

60.1695 What happens to the operating requirements during periods of startup, shutdown, and malfunction?

#### Model Rule—Emission Limits

60.1700 What pollutants are regulated by this subpart?

60.1705 What emission limits must I meet? By when?

60.1710 What happens to the emission limits during periods of startup, shutdown, and malfunction?

#### Model Rule—Continuous Emission Monitoring

60.1715 What types of continuous emission monitoring must I perform?

60.1720 What continuous emission monitoring systems must I install for gaseous pollutants?

60.1725 How are the data from the continuous emission monitoring systems used?

60.1730 How do I make sure my continuous emission monitoring systems are operating correctly?

60.1735 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?

60.1740 What is my schedule for evaluating continuous emission monitoring systems?

60.1745 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?

60.1750 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?

60.1755 How do I convert my 1-hour arithmetic averages into appropriate averaging times and units?

- 60.1760 What is required for my continuous opacity monitoring system and how are the data used?
- 60.1765 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?
- 60.1770 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?

#### Model Rule—Stack Testing

- 60.1775 What types of stack tests must I conduct?
- 60.1780 How are the stack test data used?
- 60.1785 What schedule must I follow for the stack testing?
- 60.1790 What test methods must I use to stack test?
- 60.1795 May I conduct stack testing less often?
- 60.1800 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?

#### Model Rule—Other Monitoring Requirements

- 60.1805 Must I meet other requirements for continuous monitoring?
- 60.1810 How do I monitor the load of my municipal waste combustion unit?
- 60.1815 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?
- 60.1820 How do I monitor the injection rate of activated carbon?
- 60.1825 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?

#### Model Rule—Recordkeeping

- 60.1830 What records must I keep?
- 60.1835 Where must I keep my records and for how long?
- 60.1840 What records must I keep for operator training and certification?
- 60.1845 What records must I keep for stack tests?
- 60.1850 What records must I keep for continuously monitored pollutants or parameters?
- 60.1855 What records must I keep for municipal waste combustion units that use activated carbon?

#### Model Rule—Reporting

- 60.1860 What reports must I submit and in what form?
- 60.1865 What are the appropriate units of measurement for reporting my data?
- 60.1870 When must I submit the initial report?
- 60.1875 What must I include in my initial report?
- 60.1880 When must I submit the annual report?
- 60.1885 What must I include in my annual report?
- 60.1890 What must I do if I am out of compliance with the requirements of this subpart?
- 60.1895 If a semiannual report is required, when must I submit it?

- 60.1900 What must I include in the semiannual out-of-compliance reports?
- 60.1905 Can reporting dates be changed?

#### Model Rule—Air Curtain Incinerators That Burn 100 Percent Yard Waste

- 60.1910 What is an air curtain incinerator?
- 60.1915 What is yard waste?
- 60.1920 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?
- 60.1925 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?
- 60.1930 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?

#### Equations

- 60.1935 What equations must I use?

#### Definitions

- 60.1940 What definitions must I know?

#### Tables

- Table 1 of Subpart BBBB—Model Rule—Compliance Schedules and Increments of Progress
- Table 2 of Subpart BBBB—Model Rule—Class I Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 3 of Subpart BBBB—Model Rule—Class I Nitrogen Oxides Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 4 of Subpart BBBB—Model Rule—Class II Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 5 of Subpart BBBB—Model Rule—Carbon Monoxide Emission Limits For Existing Small Municipal Waste Combustion Units
- Table 6 of Subpart BBBB—Model Rule—Requirements for Validating Continuous Emission Monitoring Systems (CEMS)
- Table 7 of Subpart BBBB—Model Rule—Requirements for Continuous Emission Monitoring Systems (CEMS)
- Table 8 of Subpart BBBB—Model Rule—Requirements for Stack Tests

#### Introduction

##### § 60.1500 What is the purpose of this subpart?

This subpart establishes emission guidelines and compliance schedules for the control of emissions from existing small municipal waste combustion units. The pollutants addressed by the emission guidelines are listed in Tables 2, 3, 4, and 5 of this subpart. The emission guidelines are developed in accordance with sections 111(d) and 129 of the Clean Air Act (CAA) and subpart B of this part.

##### § 60.1505 Am I affected by this subpart?

(a) If you are the Administrator of an air quality program in a State or United States protectorate with one or more existing small municipal waste combustion units that commenced construction on or before August 30, 1999, you must submit a State plan to the U.S. Environmental Protection Agency (EPA) that implements the emission guidelines contained in this subpart.

(b) You must submit the State plan to EPA by December 6, 2001.

##### § 60.1510 Is a State plan required for all States?

No, you are not required to submit a State plan if there are no existing small municipal waste combustion units in your State and you submit a negative declaration letter in place of the State plan.

##### § 60.1515 What must I include in my State plan?

- (a) Include nine items:
- (1) Inventory of affected municipal waste combustion units, including those that have ceased operation but have not been dismantled.
  - (2) Inventory of emissions from affected municipal waste combustion units in your State.
  - (3) Compliance schedules for each affected municipal waste combustion unit.
  - (4) Good combustion practices and emission limits for affected municipal waste combustion units that are at least as protective as the emission guidelines contained in this subpart.
  - (5) Stack testing, continuous emission monitoring, recordkeeping, and reporting requirements.
  - (6) Certification that the hearing on the State plan was held, a list of witnesses and their organizational affiliations, if any, appearing at the hearing, and a brief written summary of each presentation or written submission.

(7) Provision for State progress reports to EPA.

(8) Identification of enforceable State mechanisms that you selected for implementing the emission guidelines of this subpart.

(9) Demonstration of your State's legal authority to carry out the CAA sections 111(d) and 129 State plan.

(b) Your State plan can deviate from the format and content of the emission guidelines contained in this subpart. However, if your State plan does deviate, you must demonstrate that your State plan is as protective as the emission guidelines contained in this subpart. Your State plan must address

regulatory applicability, increments of progress for retrofit, operator training and certification, operating practice, emission limits, continuous emission monitoring, stack testing, recordkeeping, reporting, and air curtain incinerator requirements.

(c) Follow the requirements of subpart B of this part in your State plan.

**§ 60.1520 Is there an approval process for my State plan?**

The EPA will review your State plan according to § 60.27.

**§ 60.1525 What if my State plan is not approvable?**

If you do not submit an approvable State plan (or a negative declaration letter), EPA will develop a Federal plan, according to § 60.27 to implement the emission guidelines contained in this subpart. Owners and operators of municipal waste combustion units not covered by an approved and currently effective State plan must comply with the Federal plan. The Federal plan is an interim action and, by its own terms, will cease to apply when your State plan is approved and becomes effective.

**§ 60.1530 Is there an approval process for a negative declaration letter?**

No, the EPA has no formal review process for negative declaration letters. Once your negative declaration letter has been received, EPA will place a copy in the public docket and publish a notice in the **Federal Register**. If, at a later date, an existing small municipal waste combustion unit is identified in your State, the Federal plan implementing the emission guidelines contained in this subpart will automatically apply to that municipal waste combustion unit until your State plan is approved.

**§ 60.1535 What compliance schedule must I include in my State plan?**

(a) Your State plan must include compliance schedules that require small municipal waste combustion units to achieve final compliance or cease operation as expeditiously as practicable but not later than the earlier of two dates:

(1) December 6, 2005.

(2) Three years after the effective date of State plan approval.

(b) For compliance schedules longer than 1 year after the effective date of State plan approval, State plans must include two items:

(1) Dates for enforceable increments of progress as specified in § 60.1590.

(2) For Class I units (see definition in § 60.1940), dioxins/furans stack test results for at least one test conducted during or after 1990. The stack tests

must have been conducted according to the procedures specified under § 60.1790.

(c) Class I units that commenced construction after June 26, 1987 must comply with the dioxins/furans and mercury limits specified in Tables 2 and 3 of this subpart by the later of two dates:

(1) One year after the effective date of State plan approval.

(2) One year following the issuance of a revised construction or operation permit, if a permit modification is required.

**§ 60.1540 Are there any State plan requirements for this subpart that supersede the requirements specified in subpart B?**

Subpart B of this part establishes general requirements for developing and processing CAA section 111(d) plans. This subpart applies instead of the requirements in subpart B of this part, for two items:

(a) *Option for case-by-case less stringent emission standards and longer compliance schedules.* State plans developed to implement this subpart must be as protective as the emission guidelines contained in this subpart. State plans must require all municipal waste combustion units to comply no later than December 6, 2005. That requirement applies instead of the option for case-by-case less stringent emission standards and longer compliance schedules in § 60.24(f).

(b) *Increments of progress requirements.* For Class II units (see definition in § 60.1940), a State plan must include at least two increments of progress for the affected municipal waste combustion units. The two minimum increments are the final control plan submittal date and final compliance date in § 60.21(h)(1) and (5). That requirement applies instead of the requirement of § 60.24(e)(1) that would require a State plan to include all five increments of progress for all municipal waste combustion units. For Class I units under this subpart, the final control plan must contain the five increments of progress in § 60.24(e)(1).

**§ 60.1545 Does this subpart directly affect municipal waste combustion unit owners and operators in my State?**

(a) No, this subpart does not directly affect municipal waste combustion unit owners and operators in your State. However, municipal waste combustion unit owners and operators must comply with the State plan you developed to implement the emission guidelines contained in this subpart. Some States may incorporate the emission guidelines contained in this subpart into their State

plans by direct incorporation by reference. Others may include the model rule text directly in their State plan.

(b) All municipal waste combustion units must be in compliance with the requirements established in this subpart by December 6, 2005, whether the municipal waste combustion unit is regulated under a State or Federal plan.

**Applicability of State Plans**

**§ 60.1550 What municipal waste combustion units must I address in my State plan?**

(a) Your State plan must address all existing small municipal waste combustion units in your State that meet two criteria:

(1) The municipal waste combustion unit has the capacity to combust at least 35 tons per day of municipal solid waste but no more than 250 tons per day of municipal solid waste or refuse-derived fuel.

(2) The municipal waste combustion unit commenced construction on or before August 30, 1999.

(b) If an owner or operator of a municipal waste combustion unit makes changes that meet the definition of modification or reconstruction after June 6, 2001 for subpart AAAA of this part, the municipal waste combustion unit becomes subject to subpart AAAA of this part and the State plan no longer applies to that unit.

(c) If an owner or operator of a municipal waste combustion unit makes physical or operational changes to an existing municipal waste combustion unit primarily to comply with your State plan, subpart AAAA of this part (New Source Performance Standards for New Small Municipal Waste Combustion Units) does not apply to that unit. Such changes do not constitute modifications or reconstructions under subpart AAAA of this part.

**§ 60.1555 Are any small municipal waste combustion units exempt from my State plan?**

(a) *Small municipal waste combustion units that combust less than 11 tons per day.* Units are exempt from your State plan if four requirements are met:

(1) The municipal waste combustion unit is subject to a federally enforceable permit limiting the amount of municipal solid waste combusted to less than 11 tons per day.

(2) You are notified by the owner or operator that the unit qualifies for the exemption.

(3) You receive from the owner or operator of the unit a copy of the federally enforceable permit.

(4) The owner or operator of the unit keeps daily records of the amount of municipal solid waste combusted.

(b) *Small power production units.* Units are exempt from your State plan if four requirements are met:

(1) The unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) The unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity.

(3) You are notified by the owner or operator that the unit qualifies for the exemption.

(4) You receive documentation from the owner or operator that the unit qualifies for the exemption.

(c) *Cogeneration units.* Units are exempt from your State plan if four requirements are met:

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) The unit combusts homogeneous waste (excluding refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You are notified by the owner or operator that the unit qualifies for the exemption.

(4) You receive documentation from the owner or operator that the unit qualifies for the exemption.

(d) *Municipal waste combustion units that combust only tires.* Units are exempt from your State plan if three requirements are met:

(1) The municipal waste combustion unit combusts a single-item waste stream of tires and no other municipal waste (the unit can co-fire coal, fuel oil, natural gas, or other nonmunicipal solid waste).

(2) You are notified by the owner or operator that the unit qualifies for the exemption.

(3) You receive documentation from the owner or operator that the unit qualifies for the exemption.

(e) *Hazardous waste combustion units.* Units are exempt from your State plan if the units have received a permit under section 3005 of the Solid Waste Disposal Act.

(f) *Materials recovery units.* Units are exempt from your State plan if the units combust waste mainly to recover metals. Primary and secondary smelters may qualify for the exemption.

(g) *Co-fired units.* Units are exempt from your State plan if four requirements are met:

(1) The unit has a federally enforceable permit limiting municipal

solid waste combustion to 30 percent of the total fuel input by weight.

(2) You are notified by the owner or operator that the unit qualifies for the exemption.

(3) You receive from the owner or operator of the unit a copy of the federally enforceable permit.

(4) The owner or operator records the weights, each quarter, of municipal solid waste and of all other fuels combusted.

(h) *Plastics/rubber recycling units.* Units are exempt from your State plan if four requirements are met:

(1) The pyrolysis/combustion unit is an integrated part of a plastics/rubber recycling unit as defined under "Definitions" (§ 60.1940).

(2) The owner or operator of the unit records the weight, each quarter, of plastics, rubber, and rubber tires processed.

(3) The owner or operator of the unit records the weight, each quarter, of feed stocks produced and marketed from chemical plants and petroleum refineries.

(4) The owner or operator of the unit keeps the name and address of the purchaser of the feed stocks.

(i) *Units that combust fuels made from products of plastics/rubber recycling plants.* Units are exempt from your State plan if two requirements are met:

(1) The unit combusts gasoline, diesel fuel, jet fuel, fuel oils, residual oil, refinery gas, petroleum coke, liquefied petroleum gas, propane, or butane produced by chemical plants or petroleum refineries that use feed stocks produced by plastics/rubber recycling units.

(2) The unit does not combust any other municipal solid waste.

(j) *Cement kilns.* Cement kilns that combust municipal solid waste are exempt from your State plan.

(k) *Air curtain incinerators.* If an air curtain incinerator (see § 60.1940 for definition) combusts 100 percent yard waste, then those units must only meet the requirements under "Model Rule—Air Curtain Incinerators That Burn 100 Percent Yard Waste" (§§ 60.1910 through 60.1930).

**§ 60.1560 Can an affected municipal waste combustion unit reduce its capacity to less than 35 tons per day rather than comply with my State plan?**

(a) Yes, an owner or operator of an affected municipal waste combustion unit may choose to reduce, by your final compliance date, the maximum combustion capacity of the unit to less than 35 tons per day of municipal solid waste rather than comply with your

State plan. They must submit a final control plan and the notifications of achievement of increments of progress as specified in § 60.1610.

(b) The final control plan must, at a minimum, include two items:

(1) A description of the physical changes that will be made to accomplish the reduction.

(2) Calculations of the current maximum combustion capacity and the planned maximum combustion capacity after the reduction. Use the equations specified under § 60.1935(d) and (e) to calculate the combustion capacity of a municipal waste combustion unit.

(c) A permit restriction or a change in the method of operation does not qualify as a reduction in capacity. Use the equations specified under § 60.1935(d) and (e) to calculate the combustion capacity of a municipal waste combustion unit.

**§ 60.1565 What subcategories of small municipal waste combustion units must I include in my State plan?**

This subpart specifies different requirements for different subcategories of municipal waste combustion units. You must use those same two subcategories in your State plan. Those two subcategories are based on the aggregate capacity of the municipal waste combustion plant as follows:

(a) *Class I units.* Class I units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. (See the definition of "municipal waste combustion plant capacity" in § 60.1940 for specification of which units at a plant are included in the aggregate capacity calculation.)

(b) *Class II units.* Class II units are small municipal waste combustion units that are located at municipal waste combustion plants with an aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. (See the definition of "municipal waste combustion plant capacity" in § 60.1940 for specification of which units at a plant are included in the aggregate capacity calculation.)

**Use of Model Rule**

**§ 60.1570 What is the "model rule" in this subpart?**

(a) The model rule is the portion of the emission guidelines (§§ 60.1585 through 60.1905) that addresses the regulatory requirements applicable to small municipal waste combustion units. The model rule provides the requirements in a regulation format.

(b) In the model rule, "you" means the owner or operator of a small municipal waste combustion unit.

**§ 60.1575 How does the model rule relate to the required elements of my State plan?**

The model rule may be used to satisfy the State plan requirements specified in § 60.1515(a)(4) and (5). Alternative language may be used in your State plan, but only if you can demonstrate that the alternative language is as protective as the model rule.

**§ 60.1580 What are the principal components of the model rule?**

The model rule contains five major components:

- (a) Increments of progress toward compliance.
- (b) Good combustion practices:
  - (1) Operator training.
  - (2) Operator certification.
  - (3) Operating requirements.
- (c) Emission limits.
- (d) Monitoring and stack testing.
- (e) Recordkeeping and reporting.

**Model Rule—Increments of Progress**

**§ 60.1585 What are my requirements for meeting increments of progress and achieving final compliance?**

(a) *Class I units.* If you plan to achieve compliance more than 1 year following the effective date of State plan approval and a permit modification is not required, or more than 1 year following the date of issuance of a revised construction or operation permit if a permit modification is required, you must meet five increments of progress:

- (1) Submit a final control plan.
- (2) Submit a notification of retrofit contract award.
- (3) Initiate onsite construction.
- (4) Complete onsite construction.
- (5) Achieve final compliance.

(b) *Class II units.* If you plan to achieve compliance more than 1 year following the effective date of State plan approval and a permit modification is not required, or more than 1 year following the date of issuance of a revised construction or operation permit if a permit modification is required, you must meet two increments of progress:

- (1) Submit a final control plan.
- (2) Achieve final compliance.

**§ 60.1590 When must I complete each increment of progress?**

Table 1 of this subpart specifies compliance dates for each of the increments of progress for Class I and II units. (See § 60.1940 for definitions of classes.)

**§ 60.1595 What must I include in the notifications of achievement of my increments of progress?**

Your notification of achievement of increments of progress must include three items:

- (a) Notification that the increment of progress has been achieved.
- (b) Any items required to be submitted with the increment of progress (§§ 60.1610 through 60.1630).
- (c) The notification must be signed by the owner or operator of the municipal waste combustion unit.

**§ 60.1600 When must I submit the notifications of achievement of increments of progress?**

Notifications of the achievement of increments of progress must be postmarked no later than 10 days after the compliance date for the increment.

**§ 60.1605 What if I do not meet an increment of progress?**

If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the specified date in Table 1 of this subpart for achieving that increment of progress. The notification must inform the Administrator that you did not meet the increment. You must include in the notification an explanation of why the increment of progress was not met and your plan for meeting the increment as expeditiously as possible. You must continue to submit reports each subsequent month until the increment of progress is met.

**§ 60.1610 How do I comply with the increment of progress for submittal of a control plan?**

For your control plan increment of progress, you must complete two items:

- (a) Submit the final control plan, including a description of the devices for air pollution control and process changes that you will use to comply with the emission limits and other requirements of this subpart.
- (b) You must maintain an onsite copy of the final control plan.

**§ 60.1615 How do I comply with the increment of progress for awarding contracts?**

You must submit a signed copy of the contracts awarded to initiate onsite construction, initiate onsite installation of emission control equipment, and incorporate process changes. Submit the copy of the contracts with the notification that the increment of progress has been achieved. You do not need to include documents incorporated by reference or the attachments to the contracts.

**§ 60.1620 How do I comply with the increment of progress for initiating onsite construction?**

You must initiate onsite construction and installation of emission control equipment and initiate the process changes outlined in the final control plan.

**§ 60.1625 How do I comply with the increment of progress for completing onsite construction?**

You must complete onsite construction and installation of emission control equipment and complete process changes outlined in the final control plan.

**§ 60.1630 How do I comply with the increment of progress for achieving final compliance?**

For the final compliance increment of progress, you must complete two items:

- (a) Complete all process changes and complete retrofit construction as specified in the final control plan.
- (b) Connect the air pollution control equipment with the municipal waste combustion unit identified in the final control plan and complete process changes to the municipal waste combustion unit so that if the affected municipal waste combustion unit is brought online, all necessary process changes and air pollution control equipment are operating as designed.

**§ 60.1635 What must I do if I close my municipal waste combustion unit and then restart my municipal waste combustion unit?**

(a) If you close your municipal waste combustion unit but will reopen it prior to the final compliance date in your State plan, you must meet the increments of progress specified in § 60.1585.

(b) If you close your municipal waste combustion unit but will restart it after your final compliance date, you must complete emission control retrofit and meet the emission limits and good combustion practices on the date your municipal waste combustion unit restarts operation.

**§ 60.1640 What must I do if I plan to permanently close my municipal waste combustion unit and not restart it?**

(a) If you plan to close your municipal waste combustion unit rather than comply with the State plan, you must submit a closure notification, including the date of closure, to the Administrator by the date your final control plan is due.

(b) If the closure date is later than 1 year after the effective date of State plan approval, you must enter into a legally binding closure agreement with the



Administrator by the date your final control plan is due. The agreement must specify the date by which operation will cease.

#### **Model Rule—Good Combustion Practices: Operator Training**

##### **§ 60.1645 What types of training must I do?**

There are two types of required training:

- (a) Training of operators of municipal waste combustion units using the EPA or a State-approved training course.
- (b) Training of plant personnel using a plant-specific training course.

##### **§ 60.1650 Who must complete the operator training course? By when?**

(a) Three types of employees must complete the EPA or State-approved operator training course:

- (1) Chief facility operators.
- (2) Shift supervisors.
- (3) Control room operators.

(b) Those employees must complete the operator training course by the later of three dates:

- (1) One year after the effective date of State plan approval.
- (2) Six months after your municipal waste combustion unit starts up.
- (3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

(c) The requirement in paragraph (a) of this section does not apply to chief facility operators, shift supervisors, and control room operators who have obtained full certification from the American Society of Mechanical Engineers on or before the effective date of State plan approval.

(d) You may request that the EPA Administrator waive the requirement in paragraph (a) of this section for chief facility operators, shift supervisors, and control room operators who have obtained provisional certification from the American Society of Mechanical Engineers on or before the effective date of State plan approval.

##### **§ 60.1655 Who must complete the plant-specific training course?**

All employees with responsibilities that affect how a municipal waste combustion unit operates must complete the plant-specific training course. Include at least six types of employees:

- (a) Chief facility operators.
- (b) Shift supervisors.
- (c) Control room operators.
- (d) Ash handlers.
- (e) Maintenance personnel.
- (f) Crane or load handlers.

##### **§ 60.1660 What plant-specific training must I provide?**

For plant-specific training, you must do four things:

(a) For training at a particular plant, develop a specific operating manual for that plant by the later of two dates:

- (1) Six months after your municipal waste combustion unit starts up.
- (2) One year after the effective date of State plan approval.

(b) Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of your municipal waste combustion unit. Complete the initial review by the later of three dates:

- (1) One year after the effective date of State plan approval.

(2) Six months after your municipal waste combustion unit starts up.

(3) The date before an employee assumes responsibilities that affect operation of the municipal waste combustion unit.

(c) Update your manual annually.

(d) Review your manual with staff annually.

##### **§ 60.1665 What information must I include in the plant-specific operating manual?**

You must include 11 items in the operating manual for your plant:

- (a) A summary of all applicable requirements in this subpart.
- (b) A description of the basic combustion principles that apply to municipal waste combustion units.
- (c) Procedures for receiving, handling, and feeding municipal solid waste.
- (d) Procedures to be followed during periods of startup, shutdown, and malfunction of the municipal waste combustion unit.
- (e) Procedures for maintaining a proper level of combustion air supply.
- (f) Procedures for operating the municipal waste combustion unit in compliance with the requirements contained in this subpart.
- (g) Procedures for responding to periodic upset or off-specification conditions.
- (h) Procedures for minimizing carryover of particulate matter.
- (i) Procedures for handling ash.
- (j) Procedures for monitoring emissions from the municipal waste combustion unit.
- (k) Procedures for recordkeeping and reporting.

##### **§ 60.1670 Where must I keep the plant-specific operating manual?**

You must keep your operating manual in an easily accessible location at your plant. It must be available for review or inspection by all employees who must review it and by the Administrator.

#### **Model Rule—Good Combustion Practices: Operator Certification**

##### **§ 60.1675 What types of operator certification must the chief facility operator and shift supervisor obtain and by when must they obtain it?**

(a) Each chief facility operator and shift supervisor must obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in § 60.17(h)(1)) or a current provisional operator certification from your State certification program.

(b) Each chief facility operator and shift supervisor must obtain a provisional certification by the later of three dates:

(1) For Class I units, 12 months after the effective date of State plan approval. For Class II units, 18 months after the effective date of State plan approval.

(2) Six months after the municipal waste combustion unit starts up.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

(c) Each chief facility operator and shift supervisor must take one of three actions:

(1) Obtain a full certification from the American Society of Mechanical Engineers or a State certification program in your State.

(2) Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) (incorporated by reference in § 60.17(h)(1)).

(3) Schedule a full certification exam with your State certification program.

(d) The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by the later of the following dates:

(1) For Class I units, 12 months after the effective date of State plan approval. For Class II units, 18 months after the effective date of State plan approval.

(2) Six months after the municipal waste combustion unit starts up.

(3) Six months after they transfer to the municipal waste combustion unit or 6 months after they are hired to work at the municipal waste combustion unit.

##### **§ 60.1680 After the required date for operator certification, who may operate the municipal waste combustion unit?**

After the required date for full or provisional certification, you must not operate your municipal waste combustion unit unless one of four employees is on duty:

- (a) A fully certified chief facility operator.



(b) A provisionally certified chief facility operator who is scheduled to take the full certification exam.

(c) A fully certified shift supervisor.

(d) A provisionally certified shift supervisor who is scheduled to take the full certification exam.

**§ 60.1685 What if all the certified operators must be temporarily offsite?**

If the certified chief facility operator and certified shift supervisor both are unavailable, a provisionally certified control room operator at the municipal waste combustion unit may fulfill the certified operator requirement.

Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, you must meet one of three criteria:

(a) When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator.

(b) When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must record the periods when the certified chief facility operator and certified shift supervisor are offsite and include the information in the annual report as specified under § 60.1885(l).

(c) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by, the Administrator. However, you must take two actions:

(1) Notify the Administrator in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is onsite.

(2) Submit a status report and corrective action summary to the Administrator every 4 weeks following the initial notification. If the Administrator notifies you that your status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Administrator withdraws the

disapproval, municipal waste combustion unit operation may continue.

**Model Rule—Good Combustion Practices: Operating Requirements**

**§ 60.1690 What are the operating practice requirements for my municipal waste combustion unit?**

(a) You must not operate your municipal waste combustion unit at loads greater than 110 percent of the maximum demonstrated load of the municipal waste combustion unit (4-hour block average), as specified under “Definitions” (§ 60.1940).

(b) You must not operate your municipal waste combustion unit so that the temperature at the inlet of the particulate matter control device exceeds 17°C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average), as specified under “Definitions” (§ 60.1940).

(c) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test.

(d) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to your municipal waste combustion plant must be at or above the required quarterly usage of carbon. At your option, you may choose to evaluate required quarterly carbon usage on a municipal waste combustion unit basis for each individual municipal waste combustion unit at your plant. Calculate the required quarterly usage of carbon using equation 4 or 5 in § 60.1935(f).

(e) Your municipal waste combustion unit is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations:

(1) During your annual tests for dioxins/furans.

(2) During your annual mercury tests (for carbon feed rate requirements only).

(3) During the 2 weeks preceding your annual tests for dioxins/furans.

(4) During the 2 weeks preceding your annual mercury tests (for carbon feed rate requirements only).

(5) Whenever the Administrator or delegated State authority permits you to do any of five activities:

(i) Evaluate system performance.

(ii) Test new technology or control technologies.

(iii) Perform diagnostic testing.

(iv) Perform other activities to improve the performance of your municipal waste combustion unit.

(v) Perform other activities to advance the state of the art for emission controls for your municipal waste combustion unit.

**§ 60.1695 What happens to the operating requirements during periods of startup, shutdown, and malfunction?**

(a) The operating requirements of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

**Model Rule—Emission Limits**

**§ 60.1700 What pollutants are regulated by this subpart?**

Eleven pollutants, in four groupings, are regulated:

(a) *Organics*. Dioxins/furans.

(b) *Metals*.

(1) Cadmium.

(2) Lead.

(3) Mercury.

(4) Opacity.

(5) Particulate matter.

(c) *Acid gases*.

(1) Hydrogen chloride.

(2) Nitrogen oxides.

(3) Sulfur dioxide.

(d) *Other*.

(1) Carbon monoxide.

(2) Fugitive ash.

**§ 60.1705 What emission limits must I meet? By when?**

(a) After the date the initial stack test and continuous emission monitoring system evaluation are required or completed (whichever is earlier), you must meet the applicable emission limits specified in the four tables of this subpart:

(1) For Class I units, see Tables 2 and 3 of this subpart.

(2) For Class II units, see Table 4 of this subpart.

(3) For carbon monoxide emission limits for both classes of units, see Table 5 of this subpart.

(b) If your Class I municipal waste combustion unit began construction, reconstruction, or modification after June 26, 1987, then you must comply with the dioxins/furans and mercury emission limits specified in Table 2 of this subpart as applicable by the later of the following two dates:

(1) One year after the effective date of State plan approval.

(2) One year after the issuance of a revised construction or operating

permit, if a permit modification is required. Final compliance with the dioxins/furans limits must be achieved no later than December 6, 2005, even if the date 1 year after the issuance of a revised construction or operation permit is later than December 6, 2005.

**§ 60.1710 What happens to the emission limits during periods of startup, shutdown, and malfunction?**

(a) The emission limits of this subpart apply at all times except during periods of municipal waste combustion unit startup, shutdown, or malfunction.

(b) Each startup, shutdown, or malfunction must not last for longer than 3 hours.

(c) A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.

(d) During startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under § 60.11(d) apply.

**Model Rule—Continuous Emission Monitoring**

**§ 60.1715 What types of continuous emission monitoring must I perform?**

To continuously monitor emissions, you must perform four tasks:

(a) Install continuous emission monitoring systems for certain gaseous pollutants.

(b) Make sure your continuous emission monitoring systems are operating correctly.

(c) Make sure you obtain the minimum amount of monitoring data.

(d) Install a continuous opacity monitoring system.

**§ 60.1720 What continuous emission monitoring systems must I install for gaseous pollutants?**

(a) You must install, calibrate, maintain, and operate continuous emission monitoring systems for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide. If you operate a Class I municipal waste combustion unit, also install, calibrate, maintain, and operate a continuous emission monitoring system for nitrogen oxides. Install the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and oxygen (or carbon dioxide) at the outlet of the air pollution control device.

(b) You must install, evaluate, and operate each continuous emission monitoring system according to the "Monitoring Requirements" in § 60.13.

(c) You must monitor the oxygen (or carbon dioxide) concentration at each

location where you monitor sulfur dioxide and carbon monoxide. Additionally, if you operate a Class I municipal waste combustion unit, you must also monitor the oxygen (or carbon dioxide) concentration at the location where you monitor nitrogen oxides.

(d) You may choose to monitor carbon dioxide instead of oxygen as a diluent gas. If you choose to monitor carbon dioxide, then an oxygen monitor is not required and you must follow the requirements in § 60.1745.

(e) If you choose to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, you must also install continuous emission monitoring systems for sulfur dioxide and oxygen (or carbon dioxide) at the inlet of the air pollution control device.

(f) If you prefer to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction, you can apply to the Administrator for approval to use an alternative monitoring method under § 60.13(i).

**§ 60.1725 How are the data from the continuous emission monitoring systems used?**

You must use data from the continuous emission monitoring systems for sulfur dioxide, nitrogen oxides, and carbon monoxide to demonstrate continuous compliance with the applicable emission limits specified in Tables 2, 3, 4, and 5 of this subpart. To demonstrate compliance for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, see § 60.1780.

**§ 60.1730 How do I make sure my continuous emission monitoring systems are operating correctly?**

(a) Conduct initial, daily, quarterly, and annual evaluations of your continuous emission monitoring systems that measure oxygen (or carbon dioxide), sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide.

(b) Complete your initial evaluation of the continuous emission monitoring systems within 180 days after your final compliance date.

(c) For initial and annual evaluations, collect data concurrently (or within 30 to 60 minutes) using your oxygen (or carbon dioxide) continuous emission monitoring system, your sulfur dioxide, nitrogen oxides, or carbon monoxide continuous emission monitoring systems, as appropriate, and the appropriate test methods specified in

Table 6 of this subpart. Collect the data during each initial and annual evaluation of your continuous emission monitoring systems following the applicable performance specifications in appendix B of this part. Table 7 of this subpart shows the performance specifications that apply to each continuous emission monitoring system.

(d) Follow the quality assurance procedures in Procedure 1 of appendix F of this part for each continuous emission monitoring system. The procedures include daily calibration drift and quarterly accuracy determinations.

**§ 60.1735 Am I exempt from any appendix B or appendix F requirements to evaluate continuous emission monitoring systems?**

Yes, the accuracy tests for your sulfur dioxide continuous emission monitoring system require you to also evaluate your oxygen (or carbon dioxide) continuous emission monitoring system. Therefore, your oxygen (or carbon dioxide) continuous emission monitoring system is exempt from two requirements:

(a) Section 2.3 of Performance Specification 3 in appendix B of this part (relative accuracy requirement).

(b) Section 5.1.1 of appendix F of this part (relative accuracy test audit).

**§ 60.1740 What is my schedule for evaluating continuous emission monitoring systems?**

(a) Conduct annual evaluations of your continuous emission monitoring systems no more than 13 months after the previous evaluation was conducted.

(b) Evaluate your continuous emission monitoring systems daily and quarterly as specified in appendix F of this part.

**§ 60.1745 What must I do if I choose to monitor carbon dioxide instead of oxygen as a diluent gas?**

You must establish the relationship between oxygen and carbon dioxide during the initial evaluation of your continuous emission monitoring systems. You may reestablish the relationship during annual evaluations. To establish the relationship use three procedures:

(a) Use EPA Reference Method 3A or 3B in appendix A of this part to determine oxygen concentration at the location of your carbon dioxide monitor.

(b) Conduct at least three test runs for oxygen. Make sure each test run represents a 1-hour average and that sampling continues for at least 30 minutes in each hour.

(c) Use the fuel-factor equation in EPA Reference Method 3B in appendix A of this part to determine the relationship between oxygen and carbon dioxide.

**§ 60.1750 What is the minimum amount of monitoring data I must collect with my continuous emission monitoring systems and is the data collection requirement enforceable?**

(a) Where continuous emission monitoring systems are required, obtain 1-hour arithmetic averages. Make sure the averages for sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level). Use the 1-hour averages of oxygen (or carbon dioxide) data from your continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level).

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Section 60.13(e)(2) requires your continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period.

(c) Obtain valid 1-hour averages for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement regardless of the emission level monitored, and you must notify the Administrator according to § 60.1885(e).

(e) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with § 60.1755.

**§ 60.1755 How do I convert my 1-hour arithmetic averages into appropriate averaging times and units?**

(a) Use the equation in § 60.1935(a) to calculate emissions at 7 percent oxygen.

(b) Use EPA Reference Method 19 in appendix A of this part, section 4.3, to calculate the daily geometric average concentrations of sulfur dioxide emissions. If you are monitoring the percent reduction of sulfur dioxide, use EPA Reference Method 19 in appendix A of this part, section 5.4, to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.

(c) If you operate a Class I municipal waste combustion unit, use EPA

Reference Method 19 in appendix A of this part, section 4.1, to calculate the daily arithmetic average for concentrations of nitrogen oxides.

(d) Use EPA Reference Method 19 in appendix A of this part, section 4.1, to calculate the 4-hour or 24-hour daily block averages (as applicable) for concentrations of carbon monoxide.

**§ 60.1760 What is required for my continuous opacity monitoring system and how are the data used?**

(a) Install, calibrate, maintain, and operate a continuous opacity monitoring system.

(b) Install, evaluate, and operate each continuous opacity monitoring system according to § 60.13.

(c) Complete an initial evaluation of your continuous opacity monitoring system according to Performance Specification 1 in appendix B of this part. Complete the evaluation by 180 days after your final compliance date.

(d) Complete each annual evaluation of your continuous opacity monitoring system no more than 13 months after the previous evaluation.

(e) Use tests conducted according to EPA Reference Method 9 in appendix A of this part, as specified in § 60.1790, to determine compliance with the opacity limit in Table 2 or 4 of this subpart. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the opacity limit.

**§ 60.1765 What additional requirements must I meet for the operation of my continuous emission monitoring systems and continuous opacity monitoring system?**

Use the required span values and applicable performance specifications in Table 8 of this subpart.

**§ 60.1770 What must I do if any of my continuous emission monitoring systems are temporarily unavailable to meet the data collection requirements?**

Refer to Table 8 of this subpart. It shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

**Model Rule—Stack Testing****§ 60.1775 What types of stack tests must I conduct?**

Conduct initial and annual stack tests to measure the emission levels of dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

**§ 60.1780 How are the stack test data used?**

You must use results of stack tests for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash to demonstrate compliance with the applicable emission limits in Tables 2 and 4 of this subpart. To demonstrate compliance for carbon monoxide, nitrogen oxides, and sulfur dioxide, see § 60.1725.

**§ 60.1785 What schedule must I follow for the stack testing?**

(a) Conduct initial stack tests for the pollutants listed in § 60.1775 by 180 days after your final compliance date.

(b) Conduct annual stack tests for the same pollutants after the initial stack test. Conduct each annual stack test no later than 13 months after the previous stack test.

**§ 60.1790 What test methods must I use to stack test?**

(a) Follow Table 8 of this subpart to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

(b) Make sure that stack tests for all the pollutants consist of at least three test runs, as specified in § 60.8. Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the applicable emission limits in Tables 2 and 4 of this subpart.

(c) Obtain an oxygen (or carbon dioxide) measurement at the same time as your pollutant measurements to determine diluent gas levels, as specified in § 60.1720.

(d) Use the equations in § 60.1935(a) to calculate emission levels at 7 percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in Table 6 of this subpart for other required equations.

(e) You can apply to the Administrator for approval under § 60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which the Administrator has determined are adequate for demonstrating compliance, waive the requirement for a performance test because you have demonstrated by other means that you are in compliance, or use a shorter sampling time or smaller sampling volume.

**§ 60.1795 May I conduct stack testing less often?**

(a) You may test less often if you own or operate a Class II municipal waste combustion unit and if all stack tests for a given pollutant over 3 consecutive years show you comply with the emission limit. In that case, you are not required to conduct a stack test for that pollutant for the next 2 years. However, you must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows you comply with the emission limit. Thereafter, you must perform stack tests every 3rd year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, you must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The provision applies to all pollutants subject to stack testing requirements: dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

(b) You can test less often for dioxins/furans emissions if you own or operate a municipal waste combustion plant that meets two conditions. First, you have multiple municipal waste combustion units onsite that are subject to this subpart. Second, all those municipal waste combustion units have demonstrated levels of dioxins/furans emissions less than or equal to 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, for 2 consecutive years. In that case, you may choose to conduct annual stack tests on only one municipal waste combustion unit per year at your plant. The provision only applies to stack testing for dioxins/furans emissions.

(1) Conduct the stack test no more than 13 months following a stack test on any municipal waste combustion unit subject to this subpart at your plant. Each year, test a different municipal waste combustion unit subject to this subpart and test all municipal waste combustion units subject to this subpart in a sequence that you determine. Once you determine a testing sequence, it must not be changed without approval by the Administrator.

(2) If each annual stack test shows levels of dioxins/furans emissions less than or equal to 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, you may continue stack tests on only one municipal waste

combustion unit subject to this subpart per year.

(3) If any annual stack test indicates levels of dioxins/furans emissions greater than 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, conduct subsequent annual stack tests on all municipal waste combustion units subject to this subpart at your plant. You may return to testing one municipal waste combustion unit subject to this subpart per year if you can demonstrate dioxins/furans emissions levels less than or equal to 15 nanograms per dry standard cubic meter (total mass) for Class I units, or 30 nanograms per dry standard cubic meter (total mass) for Class II units, for all municipal waste combustion units at your plant subject to this subpart for 2 consecutive years.

**§ 60.1800 May I deviate from the 13-month testing schedule if unforeseen circumstances arise?**

You may not deviate from the 13-month testing schedules specified in §§ 60.1785(b) and 60.1795(b)(1) unless you apply to the Administrator for an alternative schedule, and the Administrator approves your request for alternate scheduling prior to the date on which you would otherwise have been required to conduct the next stack test.

**Model Rule—Other Monitoring Requirements****§ 60.1805 Must I meet other requirements for continuous monitoring?**

You must also monitor three operating parameters:

(a) Load level of each municipal waste combustion unit.

(b) Temperature of flue gases at the inlet of your particulate matter air pollution control device.

(c) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

**§ 60.1810 How do I monitor the load of my municipal waste combustion unit?**

(a) If your municipal waste combustion unit generates steam, you must install, calibrate, maintain, and operate a steam flowmeter or a feed water flowmeter and meet five requirements:

(1) Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.

(2) Calculate your steam (or feed water) flow in 4-hour block averages.

(3) Calculate the steam (or feed water) flow rate using the method in “American Society of Mechanical

Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1—1964 (R1991),” section 4 (incorporated by reference in § 60.17(h)(2)).

(4) Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in “American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters,” 6th Edition (1971), chapter 4 (incorporated by reference in § 60.17(h)(3)).

(5) Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.

(b) If your municipal waste combustion units do not generate steam, or, if your municipal waste combustion units have shared steam systems and steam load cannot be estimated per unit, you must determine, to the satisfaction of the Administrator, one or more operating parameters that can be used to continuously estimate load level (for example, the feed rate of municipal solid waste or refuse-derived fuel). You must continuously monitor the selected parameters.

**§ 60.1815 How do I monitor the temperature of flue gases at the inlet of my particulate matter control device?**

You must install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each particulate matter control device.

**§ 60.1820 How do I monitor the injection rate of activated carbon?**

If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, you must meet three requirements:

(a) Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).

(b) During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.

(c) Continuously monitor the selected operating parameter during all periods when the municipal waste combustion unit is operating and combusting waste

and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter. When calculating the 8-hour block average, do two things:

- (1) Exclude hours when the municipal waste combustion unit is not operating.
- (2) Include hours when the municipal waste combustion unit is operating but the carbon feed system is not working correctly.

**§ 60.1825 What is the minimum amount of monitoring data I must collect with my continuous parameter monitoring systems and is the data collection requirement enforceable?**

(a) Where continuous parameter monitoring systems are used, obtain 1-hour arithmetic averages for three parameters:

- (1) Load level of the municipal waste combustion unit.
- (2) Temperature of the flue gases at the inlet of your particulate matter control device.
- (3) Carbon feed rate if activated carbon is used to control dioxins/furans or mercury emissions.

(b) Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.

(c) Obtain valid 1-hour averages for at least 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel.

(d) If you do not obtain the minimum data required in paragraphs (a) through (c) of this section, you are in violation of the data collection requirement, and you must notify the Administrator according to § 60.1885(e).

**Model Rule—Recordkeeping**

**§ 60.1830 What records must I keep?**

You must keep four types of records:

- (a) Operator training and certification.
- (b) Stack tests.
- (c) Continuously monitored pollutants and parameters.
- (d) Carbon feed rate.

**§ 60.1835 Where must I keep my records and for how long?**

(a) Keep all records onsite in paper copy or electronic format unless the Administrator approves another format.

(b) Keep all records on each municipal waste combustion unit for at least 5 years.

(c) Make all records available for submittal to the Administrator, or for onsite review by an inspector.

**§ 60.1840 What records must I keep for operator training and certification?**

You must keep records of six items:

(a) *Records of provisional certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of the initial provisional certifications.

(3) Documentation showing current provisional certifications.

(b) *Records of full certifications.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.

(2) Dates of initial and renewal full certifications.

(3) Documentation showing current full certifications.

(c) *Records showing completion of the operator training course.* Include three items:

(1) For your municipal waste combustion plant, names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course.

(2) Dates of completion of the operator training course.

(3) Documentation showing completion of operator training course.

(d) *Records of reviews for plant-specific operating manuals.* Include three items:

(1) Names of persons who have reviewed the operating manual.

(2) Date of the initial review.

(3) Dates of subsequent annual reviews.

(e) *Records of when a certified operator is temporarily offsite.* Include two main items:

(1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.

(2) When all certified chief facility operators and certified shift supervisors are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:

(i) Your notice that all certified persons are offsite.

(ii) The conditions that cause those people to be offsite.

(iii) The corrective actions you are taking to ensure a certified chief facility operator or certified shift supervisor is onsite.

(iv) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.

(f) *Records of calendar dates.* Include the calendar date on each record.

**§ 60.1845 What records must I keep for stack tests?**

For stack tests required under § 60.1775, you must keep records of four items:

(a) The results of the stack tests for eight pollutants or parameters recorded in the appropriate units of measure specified in Table 2 or 4 of this subpart:

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Opacity.
- (6) Particulate matter.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(b) Test reports including supporting calculations that document the results of all stack tests.

(c) The maximum demonstrated load of your municipal waste combustion units and maximum temperature at the inlet of your particulate matter control device during all stack tests for dioxins/furans emissions.

(d) The calendar date of each record.

**§ 60.1850 What records must I keep for continuously monitored pollutants or parameters?**

You must keep records of eight items.

(a) *Records of monitoring data.* Document six parameters measured using continuous monitoring systems:

- (1) All 6-minute average levels of opacity.
- (2) All 1-hour average concentrations of sulfur dioxide emissions.
- (3) For Class I municipal waste combustion units only, all 1-hour average concentrations of nitrogen oxides emissions.
- (4) All 1-hour average concentrations of carbon monoxide emissions.
- (5) All 1-hour average load levels of your municipal waste combustion unit.
- (6) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.

(b) *Records of average concentrations and percent reductions.* Document five parameters:

- (1) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, all 24-hour daily arithmetic average concentrations of nitrogen oxides emissions.

(3) All 4-hour block or 24-hour daily block arithmetic average concentrations of carbon monoxide emissions.

(4) All 4-hour block arithmetic average load levels of your municipal waste combustion unit.

(5) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.

(c) *Records of exceedances.* Document three items:

(1) Calendar dates whenever any of the five pollutant or parameter levels recorded in paragraph (b) of this section or the opacity level recorded in paragraph (a)(1) of this section did not meet the emission limits or operating levels specified in this subpart.

(2) Reasons you exceeded the applicable emission limits or operating levels.

(3) Corrective actions you took, or are taking, to meet the emission limits or operating levels.

(d) *Records of minimum data.*

Document three items:

(1) Calendar dates for which you did not collect the minimum amount of data required under §§ 60.1750 and 60.1825. Record those dates for five types of pollutants and parameters:

(i) Sulfur dioxide emissions.

(ii) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(iii) Carbon monoxide emissions.

(iv) Load levels of your municipal waste combustion unit.

(v) Temperatures of the flue gases at the inlet of the particulate matter control device.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took or are taking to obtain the required amount of data.

(e) *Records of exclusions.* Document each time you have excluded data from your calculation of averages for any of the following five pollutants or parameters and the reasons the data were excluded:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load levels of your municipal waste combustion unit.

(5) Temperatures of the flue gases at the inlet of the particulate matter control device.

(f) *Records of drift and accuracy.* Document the results of your daily drift

tests and quarterly accuracy determinations according to Procedure 1 of appendix F of this part. Keep those records for the sulfur dioxide, nitrogen oxides (Class I municipal waste combustion units only), and carbon monoxide continuous emissions monitoring systems.

(g) *Records of the relationship between oxygen and carbon dioxide.* If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, document the relationship between oxygen and carbon dioxide, as specified in § 60.1745.

(h) *Records of calendar dates.* Include the calendar date on each record.

#### **§ 60.1855 What records must I keep for municipal waste combustion units that use activated carbon?**

For municipal waste combustion units that use activated carbon to control dioxins/furans or mercury emissions, you must keep records of five items:

(a) *Records of average carbon feed rate.* Document five items:

(1) Average carbon feed rate in kilograms (or pounds) per hour during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.

(2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.

(3) All 8-hour block average carbon feed rates in kilograms (or pounds) per hour calculated from the monitored operating parameter.

(4) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include supporting documentation.

(5) Required quarterly usage of carbon for the municipal waste combustion plant, calculated using equation 4 or 5 in § 60.1935(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant. Include supporting calculations.

(b) *Records of low carbon feed rates.* Document three items:

(1) The calendar dates when the average carbon feed rate over an 8-hour

block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).

(2) Reasons for the low carbon feed rates.

(3) Corrective actions you took or are taking to meet the 8-hour average carbon feed rate requirement.

(c) *Records of minimum carbon feed rate data.* Document three items:

(1) Calendar dates for which you did not collect the minimum amount of carbon feed rate data required under § 60.1825.

(2) Reasons you did not collect the minimum data.

(3) Corrective actions you took or are taking to get the required amount of data.

(d) *Records of exclusions.* Document each time you have excluded data from your calculation of average carbon feed rates and the reasons the data were excluded.

(e) *Records of calendar dates.* Include the calendar date on each record.

#### **Model Rule—Reporting**

##### **§ 60.1860 What reports must I submit and in what form?**

(a) Submit an initial report and annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits specified in this subpart.

(b) Submit all reports on paper, postmarked on or before the submittal dates in §§ 60.1870, 60.1880, and 60.1895. If the Administrator agrees, you may submit electronic reports.

(c) Keep a copy of all reports required by §§ 60.1875, 60.1885, and 60.1900 onsite for 5 years.

##### **§ 60.1865 What are the appropriate units of measurement for reporting my data?**

See Tables 2, 3, 4 and 5 of this subpart for appropriate units of measurement.

##### **§ 60.1870 When must I submit the initial report?**

As specified in § 60.7(c), submit your initial report by 180 days after your final compliance date.

##### **§ 60.1875 What must I include in my initial report?**

You must include seven items:

(a) The emission levels measured on the date of the initial evaluation of your continuous emission monitoring systems for all of the following five pollutants or parameters as recorded in accordance with § 60.1850(b).

(1) The 24-hour daily geometric average concentration of sulfur dioxide emissions or the 24-hour daily

geometric percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, the 24-hour daily arithmetic average concentration of nitrogen oxides emissions.

(3) The 4-hour block or 24-hour daily arithmetic average concentration of carbon monoxide emissions.

(4) The 4-hour block arithmetic average load level of your municipal waste combustion unit.

(5) The 4-hour block arithmetic average flue gas temperature at the inlet of the particulate matter control device.

(b) The results of the initial stack tests for eight pollutants or parameters (use appropriate units as specified in Table 2 or 4 of this subpart):

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Opacity.
- (6) Particulate matter.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(c) The test report that documents the initial stack tests including supporting calculations.

(d) The initial performance evaluation of your continuous emissions monitoring systems. Use the applicable performance specifications in appendix B of this part in conducting the evaluation.

(e) The maximum demonstrated load of your municipal waste combustion unit and the maximum demonstrated temperature of the flue gases at the inlet of the particulate matter control device. Use values established during your initial stack test for dioxins/furans emissions and include supporting calculations.

(f) If your municipal waste combustion unit uses activated carbon to control dioxins/furans or mercury emissions, the average carbon feed rates that you recorded during the initial stack tests for dioxins/furans and mercury emissions. Include supporting calculations as specified in § 60.1855(a)(1) and (2).

(g) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in § 60.1745.

#### **§ 60.1880 When must I submit the annual report?**

Submit the annual report no later than February 1 of each year that follows the calendar year in which you collected the data. If you have an operating permit for any unit under title V of the CAA, the permit may require you to submit semiannual reports. Parts 70 and 71 of

this chapter contain program requirements for permits.

#### **§ 60.1885 What must I include in my annual report?**

Summarize data collected for all pollutants and parameters regulated under this subpart. Your summary must include twelve items:

(a) The results of the annual stack test, using appropriate units, for eight pollutants, as recorded under § 60.1845(a):

- (1) Dioxins/furans.
- (2) Cadmium.
- (3) Lead.
- (4) Mercury.
- (5) Opacity.
- (6) Particulate matter.
- (7) Hydrogen chloride.
- (8) Fugitive ash.

(b) A list of the highest average levels recorded, in the appropriate units. List those values for five pollutants or parameters:

- (1) Sulfur dioxide emissions.
- (2) For Class I municipal waste combustion units only, nitrogen oxides emissions.
- (3) Carbon monoxide emissions.
- (4) Load level of the municipal waste combustion unit.
- (5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).

(c) The highest 6-minute opacity level measured. Base the value on all 6-minute average opacity levels recorded by your continuous opacity monitoring system (§ 60.1850(a)(1)).

(d) For municipal waste combustion units that use activated carbon for controlling dioxins/furans or mercury emissions, include four records:

(1) The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.

(2) The lowest 8-hour block average carbon feed rate recorded during the year.

(3) The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant.

(4) The required quarterly carbon usage of your municipal waste combustion plant calculated using equation 4 or 5 in § 60.1935(f). If you choose to evaluate required quarterly usage for carbon on a municipal waste combustion unit basis, record the required quarterly usage for each municipal waste combustion unit at your plant.

(e) The total number of days that you did not obtain the minimum number of hours of data for six pollutants or parameters. Include the reasons you did not obtain the data and corrective actions that you have taken to obtain the data in the future. Include data on:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

(6) Carbon feed rate.

(f) The number of hours you have excluded data from the calculation of average levels (include the reasons for excluding it). Include data for six pollutants or parameters:

(1) Sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, nitrogen oxides emissions.

(3) Carbon monoxide emissions.

(4) Load level of the municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

(6) Carbon feed rate.

(g) A notice of your intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year if you are eligible for alternative scheduling (§ 60.1795(a) or (b)).

(h) A notice of your intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if you are eligible for alternative scheduling (§ 60.1795(a)).

(i) A summary of any emission or parameter level that did not meet the limits specified in this subpart.

(j) A summary of the data in paragraphs (a) through (d) of this section from the year preceding the reporting year which gives the Administrator a summary of the performance of the municipal waste combustion unit over a 2-year period.

(k) If you choose to monitor carbon dioxide instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in § 60.1745.

(l) Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.

#### **§ 60.1890 What must I do if I am out of compliance with the requirements of this subpart?**

You must submit a semiannual report on any recorded emission or parameter



level that does not meet the requirements specified in this subpart.

**§ 60.1895 If a semiannual report is required, when must I submit it?**

(a) For data collected during the first half of a calendar year, submit your semiannual report by August 1 of that year.

(b) For data you collected during the second half of the calendar year, submit your semiannual report by February 1 of the following year.

**§ 60.1900 What must I include in the semiannual out-of-compliance reports?**

You must include three items in the semiannual report:

(a) For any of the following six pollutants or parameters that exceeded the limits specified in this subpart, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and your corrective actions:

(1) Concentration or percent reduction of sulfur dioxide emissions.

(2) For Class I municipal waste combustion units only, concentration of nitrogen oxides emissions.

(3) Concentration of carbon monoxide emissions.

(4) Load level of your municipal waste combustion unit.

(5) Temperature of the flue gases at the inlet of your particulate matter air pollution control device.

(6) Average 6-minute opacity level. The data obtained from your continuous opacity monitoring system are not used to determine compliance with the limit on opacity emissions.

(b) If the results of your annual stack tests (as recorded in § 60.1845(a)) show emissions above the limits specified in Table 2 or 4 of this subpart as applicable for dioxins/furans, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and your corrective actions.

(c) For municipal waste combustion units that apply activated carbon to control dioxins/furans or mercury emissions, include two items:

(1) Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in § 60.1855(a)(1)). Include four items:

(i) Eight-hour average carbon feed rate.

(ii) Reasons for occurrences of low carbon feed rates.

(iii) The corrective actions you have taken to meet the carbon feed rate requirement.

(iv) The calendar date.

(2) Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If you choose to evaluate total carbon purchased and delivered on a municipal waste combustion unit basis, record the total carbon purchased and delivered for each individual municipal waste combustion unit at your plant. Include five items:

(i) Amount of carbon purchased and delivered to the plant.

(ii) Required quarterly usage of carbon.

(iii) Reasons for not meeting the required quarterly usage of carbon.

(iv) The corrective actions you have taken to meet the required quarterly usage of carbon.

(v) The calendar date.

**§ 60.1905 Can reporting dates be changed?**

(a) If the Administrator agrees, you may change the semiannual or annual reporting dates.

(b) See § 60.19(c) for procedures to seek approval to change your reporting date.

**Model Rule—Air Curtain Incinerators That Burn 100 Percent Yard Waste**

**§ 60.1910 What is an air curtain incinerator?**

An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

**§ 60.1915 What is yard waste?**

Yard waste is grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(a) Construction, renovation, and demolition wastes that are exempt from the definition of “municipal solid waste” in § 60.1940.

(b) Clean wood that is exempt from the definition of “municipal solid waste” in § 60.1940.

**§ 60.1920 What are the emission limits for air curtain incinerators that burn 100 percent yard waste?**

If your air curtain incinerator combusts 100 percent yard waste, you

must only meet the emission limits in this section.

(a) By 180 days after your final compliance date, you must meet two limits:

(1) The opacity limit is 10 percent (6-minute average) for air curtain incinerators that can combust at least 35 tons per day of municipal solid waste and no more than 250 tons per day of municipal solid waste.

(2) The opacity limit is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times. Each malfunction must not exceed 3 hours.

**§ 60.1925 How must I monitor opacity for air curtain incinerators that burn 100 percent yard waste?**

(a) Use EPA Reference Method 9 in appendix A of this part to determine compliance with the opacity limit.

(b) Conduct an initial test for opacity as specified in § 60.8.

(c) After the initial test for opacity, conduct annual tests no more than 13 calendar months following the date of your previous test.

**§ 60.1930 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent yard waste?**

(a) Provide a notice of construction that includes four items:

(1) Your intent to construct the air curtain incinerator.

(2) Your planned initial startup date.

(3) Types of fuels you plan to combust in your air curtain incinerator.

(4) The capacity of your incinerator, including supporting capacity calculations, as specified in § 60.1935(d) and (e).

(b) Keep records of results of all opacity tests onsite in either paper copy or electronic format unless the Administrator approves another format.

(c) Keep all records for each incinerator for at least 5 years.

(d) Make all records available for submittal to the Administrator or for onsite review by an inspector.

(e) Submit the results (each 6-minute average) of the opacity tests by February 1 of the year following the year of the opacity emission test.

(f) Submit reports as a paper copy on or before the applicable submittal date. If the Administrator agrees, you may submit reports on electronic media.

(g) If the Administrator agrees, you may change the annual reporting dates (see § 60.19(c)).

(h) Keep a copy of all reports onsite for a period of 5 years.



**Equations****§ 60.1935 What equations must I use?**

(a) *Concentration correction to 7 percent oxygen.* Correct any pollutant

concentration to 7 percent oxygen using equation 1 of this section:

$$C_{7\%} = C_{\text{unc}} * (13.9) * (1 / (20.9 - \text{CO}_2)) \quad (\text{Eq. 1})$$

Where:

$C_{7\%}$  = concentration corrected to 7 percent oxygen.

$C_{\text{unc}}$  = uncorrected pollutant concentration.

$\text{CO}_2$  = concentration of oxygen (percent).

(b) *Percent reduction in potential mercury emissions.* Calculate the percent reduction in potential mercury

emissions ( $\%P_{\text{Hg}}$ ) using equation 2 of this section:

$$\%P_{\text{Hg}} = (E_i - E_o) * (100 / E_i) \quad (\text{Eq. 2})$$

Where:

$\%P_{\text{Hg}}$  = percent reduction of potential mercury emissions

$E_i$  = mercury emission concentration as measured at the air pollution

control device inlet, corrected to 7 percent oxygen, dry basis

$E_o$  = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(c) *Percent reduction in potential hydrogen chloride emissions.* Calculate the percent reduction in potential hydrogen chloride emissions ( $\%P_{\text{HCl}}$ ) using equation 3 of this section:

$$\%P_{\text{HCl}} = (E_i - E_o) * (100 / E_i) \quad (\text{Eq. 3})$$

Where:

$\%P_{\text{HCl}}$  = percent reduction of the potential hydrogen chloride emissions

$E_i$  = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis

$E_o$  = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

(d) *Capacity of a municipal waste combustion unit.* For a municipal waste combustion unit that can operate continuously for 24-hour periods, calculate the municipal waste combustion unit capacity based on 24 hours of operation at the maximum charge rate. To determine the maximum charge rate, use one of two methods:

(1) For municipal waste combustion units with a design based on heat input capacity, calculate the maximum charging rate based on the maximum heat input capacity and one of two heating values:

(i) If your municipal waste combustion unit combusts refuse-derived fuel, use a heating value of 12,800 kilojoules per kilogram (5,500 British thermal units per pound).

(ii) If your municipal waste combustion unit combusts municipal solid waste, use a heating value of

10,500 kilojoules per kilogram (4,500 British thermal units per pound).

(2) For municipal waste combustion units with a design not based on heat input capacity, use the maximum designed charging rate.

(e) *Capacity of a batch municipal waste combustion unit.* Calculate the capacity of a batch municipal waste combustion unit as the maximum design amount of municipal solid waste they can charge per batch multiplied by the maximum number of batches they can process in 24 hours. Calculate the maximum number of batches by dividing 24 by the number of hours needed to process one batch. Retain fractional batches in the calculation. For example, if one batch requires 16 hours, the municipal waste combustion unit can combust 24/16, or 1.5 batches, in 24 hours.

(f) *Quarterly carbon usage.* If you use activated carbon to comply with the dioxins/furans or mercury limits, calculate the required quarterly usage of carbon using equation 4 of this section for plant basis or equation 5 of this section for unit basis:

(1) Plant basis.

$$C = \sum_{i=1}^n f_i * h_i \quad (\text{Eq. 4})$$

Where:

$C$  = required quarterly carbon usage for the plant in kilograms (or pounds).

$f_i$  = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

$h_i$  = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

$n$  = number of municipal waste combustion units,  $i$ , located at your plant.

(2) Unit basis.

$$C = f * h \quad (\text{Eq. 5})$$

Where:

$C$  = required quarterly carbon usage for the unit in kilograms (or pounds).

$f$  = required carbon feed rate for the municipal waste combustion unit in kilograms (or pounds) per hour. That is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

$h$  = number of hours the municipal waste combustion unit was in operation during the calendar quarter (hours).

## Definitions

### § 60.1940 What definitions must I know?

Terms used but not defined in this section are defined in the CAA and in subparts A and B of this part.

*Administrator* means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or the Administrator of a State Air Pollution Control Agency.

*Air curtain incinerator* means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of that type can be constructed above or below ground and with or without refractory walls and floor.

*Batch municipal waste combustion unit* means a municipal waste combustion unit designed so it cannot combust municipal solid waste continuously 24 hours per day because the design does not allow waste to be fed to the unit or ash to be removed during combustion.

*Calendar quarter* means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

*Calendar year* means 365 (or 366 consecutive days in leap years) consecutive days starting on January 1 and ending on December 31.

*Chief facility operator* means the person in direct charge and control of the operation of a municipal waste combustion unit. That person is responsible for daily onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit.

*Class I units* mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See the definition in this section of "municipal waste combustion plant capacity" for specification of which units at a plant site are included in the aggregate capacity calculation.

*Class II units* mean small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See the definition in this section of "municipal waste combustion plant capacity" for specification of which units at a plant site are included in the aggregate capacity calculation.

*Clean wood* means untreated wood or untreated wood products including

clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include two items:

(1) "Yard waste," which is defined elsewhere in this section.

(2) Construction, renovation, or demolition wastes (for example, railroad ties and telephone poles) that are exempt from the definition of "municipal solid waste" in this section.

*Co-fired combustion unit* means a unit that combusts municipal solid waste with nonmunicipal solid waste fuel (for example, coal, industrial process waste). To be considered a co-fired combustion unit, the unit must be subject to a federally enforceable permit that limits it to combusting a fuel feed stream which is 30 percent or less (by weight) municipal solid waste as measured each calendar quarter.

*Continuous burning* means the continuous, semicontinuous, or batch feeding of municipal solid waste to dispose of the waste, produce energy, or provide heat to the combustion system in preparation for waste disposal or energy production. Continuous burning does not mean the use of municipal solid waste solely to thermally protect the grate or hearth during the startup period when municipal solid waste is not fed to the grate or hearth.

*Continuous emission monitoring system* means a monitoring system that continuously measures the emissions of a pollutant from a municipal waste combustion unit.

*Dioxins/furans* mean tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

*Effective date of State plan approval* means the effective date that the EPA approves the State plan. The **Federal Register** specifies the date in the notice that announces EPA's approval of the State plan.

*Eight-hour block average* means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of three 8-hour periods of time:

(1) 12:00 midnight to 8:00 a.m.

(2) 8:00 a.m. to 4:00 p.m.

(3) 4:00 p.m. to 12:00 midnight.

*Federally enforceable* means all limits and conditions the Administrator can enforce (including the requirements of 40 CFR parts 60, 61, and 63), requirements in a State's implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*First calendar half* means the period that starts on January 1 and ends on June 30 in any year.

*Fluidized bed combustion unit* means a unit where municipal waste is combusted in a fluidized bed of material. The fluidized bed material may remain in the primary combustion zone or may be carried out of the primary combustion zone and returned through a recirculation loop.

*Four-hour block average* or *4-hour block average* means the average of all hourly emission concentrations or parameter levels when the municipal waste combustion unit operates and combusts municipal solid waste measured over any of six 4-hour periods:

(1) 12:00 midnight to 4:00 a.m.

(2) 4:00 a.m. to 8:00 a.m.

(3) 8:00 a.m. to 12:00 noon.

(4) 12:00 noon to 4:00 p.m.

(5) 4:00 p.m. to 8:00 p.m.

(6) 8:00 p.m. to 12:00 midnight.

*Mass burn refractory municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a refractory wall furnace. Unless otherwise specified, that includes municipal waste combustion units with a cylindrical rotary refractory wall furnace.

*Mass burn rotary waterwall municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a cylindrical rotary waterwall furnace.

*Mass burn waterwall municipal waste combustion unit* means a field-erected municipal waste combustion unit that combusts municipal solid waste in a waterwall furnace.

*Maximum demonstrated load of a municipal waste combustion unit* means the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxins/furans stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in this subpart.

*Maximum demonstrated temperature of the particulate matter control device* means the highest 4-hour block arithmetic average flue gas temperature measured at the inlet of the particulate matter control device during 4 consecutive hours in the course of the most recent stack test for dioxins/furans emissions that demonstrates compliance with the limits specified in this subpart.

*Medical/infectious waste* means any waste meeting the definition of "medical/infectious waste" in § 60.51c.

*Mixed fuel-fired (pulverized coal/refuse-derived fuel) combustion unit* means a combustion unit that combusts coal and refuse-derived fuel simultaneously, in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the unit where it is combusted in suspension. That includes both conventional pulverized coal and micropulverized coal.

*Modification or modified municipal waste combustion unit* means a municipal waste combustion unit you have changed after June 6, 2001 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the unit (not including the cost of land) updated to current costs.

(2) Any physical change in the municipal waste combustion unit or change in the method of operating it that increases the emission level of any air pollutant for which new source performance standards have been established under section 129 or section 111 of the CAA. Increases in the emission level of any air pollutant are determined when the municipal waste combustion unit operates at 100 percent of its physical load capability and are measured downstream of all air pollution control devices. Load restrictions based on permits or other nonphysical operational restrictions cannot be considered in the determination.

*Modular excess-air municipal waste combustion unit* means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers, all of which are designed to operate at conditions with combustion air amounts in excess of theoretical air requirements.

*Modular starved-air municipal waste combustion unit* means a municipal waste combustion unit that combusts municipal solid waste, is not field-erected, and has multiple combustion chambers in which the primary combustion chamber is designed to operate at substoichiometric conditions.

*Municipal solid waste or municipal-type solid waste* means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar

establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

*Municipal waste combustion plant* means one or more municipal waste combustion units at the same location as specified under Applicability of State Plans (§ 60.1550(a)).

*Municipal waste combustion plant capacity* means the aggregate municipal waste combustion capacity of all municipal waste combustion units at the plant that are not subject to subparts Ea, Eb, or AAAA of this part.

*Municipal waste combustion unit* means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected combustion units (with or without heat recovery), modular combustion units (starved-air or excess-air), boilers (for example, steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. Two criteria further define municipal waste combustion units:

(1) Municipal waste combustion units do not include pyrolysis or combustion units located at a plastics or rubber recycling unit as specified under Applicability of State Plans (§ 60.1555(h) and (i)). Municipal waste combustion units do not include cement kilns that combust municipal solid waste as specified under Applicability of State Plans (§ 60.1555(j)). Municipal waste combustion units also do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

(2) The boundaries of a municipal waste combustion unit are defined as follows. The municipal waste combustion unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustion unit water system. The

municipal waste combustion unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine-generator set. The municipal waste combustion unit boundary starts at the municipal solid waste pit or hopper and extends through three areas:

(i) The combustion unit flue gas system, which ends immediately after the heat recovery equipment or, if there is no heat recovery equipment, immediately after the combustion chamber.

(ii) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. It includes all ash handling systems connected to the bottom ash handling system.

(iii) The combustion unit water system, which starts at the feed water pump and ends at the piping that exits the steam drum or superheater.

*Particulate matter* means total particulate matter emitted from municipal waste combustion units as measured using EPA Reference Method 5 in appendix A of this part and the procedures specified in § 60.1790.

*Plastics or rubber recycling unit* means an integrated processing unit for which plastics, rubber, or rubber tires are the only feed materials (incidental contaminants may be in the feed materials). The feed materials are processed and marketed to become input feed stock for chemical plants or petroleum refineries. The following three criteria further define a plastics or rubber recycling unit:

(1) Each calendar quarter, the combined weight of the feed stock that a plastics or rubber recycling unit produces must be more than 70 percent of the combined weight of the plastics, rubber, and rubber tires that recycling unit processes.

(2) The plastics, rubber, or rubber tires fed to the recycling unit may originate from separating or diverting plastics, rubber, or rubber tires from municipal or industrial solid waste. The feed materials may include manufacturing scraps, trimmings, and off-specification plastics, rubber, and rubber tire discards.

(3) The plastics, rubber, and rubber tires fed to the recycling unit may contain incidental contaminants (for example, paper labels on plastic bottles or metal rings on plastic bottle caps).

*Potential hydrogen chloride emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

*Potential mercury emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without controls for mercury emissions.

*Potential sulfur dioxide emissions* means the level of emissions from a municipal waste combustion unit that would occur from combusting municipal solid waste without emission controls for acid gases.

*Pyrolysis/combustion unit* means a unit that produces gases, liquids, or solids by heating municipal solid waste. The gases, liquids, or solids produced are combusted and the emissions vented to the atmosphere.

*Reconstruction* means rebuilding a municipal waste combustion unit and meeting two criteria:

(1) The reconstruction begins after June 6, 2001.

(2) The cumulative cost of the construction over the life of the unit exceeds 50 percent of the original cost of building and installing the municipal waste combustion unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the municipal waste combustion unit used to calculate the costs, see the definition in this section of "municipal waste combustion unit."

*Refractory unit or refractory wall furnace* means a municipal waste combustion unit that has no energy recovery (such as through a waterwall) in the furnace of the municipal waste combustion unit.

*Refuse-derived fuel* means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. That includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

*Same location* means the same or contiguous properties under common ownership or control, including those separated only by a street, road,

highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or any combination thereof. Entities may include a municipality, other governmental unit, or any quasi-governmental authority (for example, a public utility district or regional authority for waste disposal).

*Second calendar half* means the period that starts on July 1 and ends on December 31 in any year.

*Shift supervisor* means the person who is in direct charge and control of operating a municipal waste combustion unit and who is responsible for onsite supervision, technical direction, management, and overall performance of the municipal waste combustion unit during an assigned shift.

*Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel) combustion unit* means a municipal waste combustion unit that combusts coal and refuse-derived fuel simultaneously, in which coal is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

*Standard conditions* when referring to units of measure mean a temperature of 20 °C and a pressure of 101.3 kilopascals.

*Startup period* means the period when a municipal waste combustion unit begins the continuous combustion of municipal solid waste. It does not include any warmup period during which the municipal waste combustion unit combusts fossil fuel or other solid waste fuel but receives no municipal solid waste.

*State* means any of the 50 United States and the protectorates of the United States.

*State plan* means a plan submitted pursuant to sections 111(d) and 129(b)(2) of the CAA and subpart B of this part, that implements and enforces this subpart.

*Stoker (refuse-derived fuel) combustion unit* means a steam

generating unit that combusts refuse-derived fuel in a semisuspension combusting mode, using air-fed distributors.

*Total mass dioxins/furans or total mass* means the total mass of tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans as determined using EPA Reference Method 23 in appendix A of this part and the procedures specified in § 60.1790.

*Twenty-four hour daily average or 24-hour daily average* means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the municipal waste combustion unit operates and combusts municipal solid waste measured during the 24 hours between 12:00 midnight and the following midnight.

*Untreated lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

*Waterwall furnace* means a municipal waste combustion unit that has energy (heat) recovery in the furnace (for example, radiant heat transfer section) of the combustion unit.

*Yard waste* means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

(1) Construction, renovation, and demolition wastes that are exempt from the definition of "municipal solid waste" in this section.

(2) Clean wood that is exempt from the definition of "municipal solid waste" in this section.

## Tables

TABLE 1 OF SUBPART BBBB—MODEL RULE—COMPLIANCE SCHEDULES AND INCREMENTS OF PROGRESS

Affected units	Increment 1 (Submit final control plan)	Increment 2 (Award contracts)	Increment 3 (Begin onsite construction)	Increment 4 (Complete onsite construction)	Increment 5 (Final compliance)
1. All Class I units <sup>a,b</sup>	(Dates to be specified in State plan).	(Dates to be specified in State plan).	(Dates to be specified in State plan).	(Dates to be specified in State plan).	(Dates to be specified in State plan) <sup>c,d</sup> .
2. All Class II units <sup>a,c</sup>	(Dates to be specified in State plan).	Not applicable .....	Not applicable .....	Not applicable .....	(Dates to be specified in State plan) <sup>c</sup> .

<sup>a</sup>Plant specific schedules can be used at the discretion of the State.

<sup>b</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>c</sup> The date can be no later than 3 years after the effective date of State plan approval or December 6, 2005.

<sup>d</sup> For Class I units that began construction, reconstruction, or modification after June 26, 1987, comply with the dioxins/furans and mercury limits by the later of two dates:

1. One year after the effective date of State plan approval.

2. One year after the issuance of a revised construction or operation permit, if a permit modification is required.

3. Final compliance with the dioxins/furans limits must be achieved no later than December 6, 2005, even if the date one year after the issuance of a revised construction or operation permit is after December 6, 2005.

<sup>e</sup> Class II units mean all small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

TABLE 2 OF SUBPART BBBB—MODEL RULE—CLASS I EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNITS<sup>a</sup>

For the following pollutants	You must meet the following emission limits <sup>b</sup>	Using the following averaging times	And determine compliance by the following methods
1. Organics: Dioxins/Furans (total mass basis).	30 nanograms per dry standard cubic meter for municipal waste combustion units that do not employ an electrostatic precipitator-based emission control system -or- 60 nanograms per dry standard cubic meter for municipal waste combustion units that employ an electrostatic precipitator-based emission control system.	3-run average (minimum run duration is 4 hours).	Stack test.
2. Metals: Cadmium .....	0.040 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
Lead .....	0.490 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
Mercury .....	0.080 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
Opacity .....	85 percent reduction of potential mercury emissions. 10 percent .....	Thirty 6-minute averages .....	Stack test.
Particulate Matter .....	27 milligrams per dry standard cubic meter .....	3-run average (run duration specified in test method).	Stack test.
3. Acid Gases: Hydrogen Chloride .....	31 parts per million by dry volume 95 percent reduction of potential hydrogen chloride emissions.	3-run average (minimum run duration is 1 hour).	Stack test.
Sulfur Dioxide .....	31 parts per million by dry volume 75 percent reduction of potential sulfur dioxide emissions.	24-hour daily block geometric average concentration percent reduction.	Continuous emission monitoring system.
4. Other: Fugitive Ash .....	Visible emissions for no more than 5 percent of hourly observation period.	Three 1-hour observation periods.	Visible emission test.

<sup>a</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>b</sup> All emission limits (except for opacity) are measured at 7 percent oxygen.

TABLE 3 OF SUBPART BBBB—MODEL RULE—CLASS I NITROGEN OXIDES EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNITS<sup>a,b,c</sup>

Municipal waste combustion technology	Limits for class I municipal waste combustion units
1. Mass burn waterwall .....	200 parts per million by dry volume.
2. Mass burn rotary waterwall .....	170 parts per million by dry volume.
3. Refuse-derived fuel .....	250 parts per million by dry volume.
4. Fluidized bed .....	220 parts per million by dry volume.
5. Mass burn refractory .....	350 parts per million by dry volume.
6. Modular excess air .....	190 parts per million by dry volume.
7. Modular starved air .....	380 parts per million by dry volume.

<sup>a</sup> Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>b</sup> Nitrogen oxides limits are measured at 7 percent oxygen.

<sup>c</sup> All limits are 24-hour daily block arithmetic average concentration. Compliance is determined for Class I units by continuous emission monitoring systems.

TABLE 4 OF SUBPART BBBB—MODEL RULE—CLASS II EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNIT<sup>a</sup>

For the following pollutants	You must meet the following emission following determine limits <sup>b</sup>	Using the following averaging times	And determine compliance by the following methods
1. Organics: Dioxins/Furans (total mass basis) .....	125 nanograms per dry standard cubic meter.	3-run average (minimum run duration is 4 hours).	Stack test.
2. Metals: Cadmium .....	0.10 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Lead .....	1.6 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Mercury .....	0.080 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
Opacity .....	85 percent reduction of potential mercury emissions. 10 percent .....	Thirty 6-minute average ....	Stack test.
Particulate Matter .....	70 milligrams per dry standard cubic meter.	3-run average (run duration specified in test method).	Stack test.
3. Acid Gases: Hydrogen Chloride .....	250 parts per million by volume -or- 50 percent reduction of potential hydrogen chloride emissions.	3-run average (minimum run duration is 1 hour).	Stack test.
Sulfur Dioxide .....	77 parts per million by dry volume -or- 50 percent reduction of potential sulfur dioxides emissions.	24-hour daily block geometric average concentration -or- percent reduction.	Continuous emission monitoring system.
4. Other: Fugitive Ash .....	Visible emissions for no more than 5 percent of hourly observation period.	Three 1-hour observation periods.	Visible emission test.

<sup>a</sup> Class II units mean all small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than or equal to 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

<sup>b</sup> All emission limits (except for opacity) are measured at 7 percent oxygen.

<sup>c</sup> No monitoring, testing, recordkeeping or reporting is required to demonstrate compliance with the nitrogen oxides limit for Class II units.

TABLE 5 OF SUBPART BBBB—MODEL RULE—CARBON MONOXIDE EMISSION LIMITS FOR EXISTING SMALL MUNICIPAL WASTE COMBUSTION UNITS

For the following municipal waste combustion units	You must meet the following carbon monoxide limits <sup>a</sup>	Using the following averaging times <sup>b</sup>
1. Fluidized bed .....	100 parts per million by dry volume .....	4-hour.
2. Fluidized bed, mixed fuel, (wood/refuse-derived fuel) .....	200 parts per million by dry volume .....	24-hour <sup>c</sup> .
3. Mass burn rotary refractory .....	100 parts per million by dry volume .....	4-hour.
4. Mass burn rotary waterwall .....	250 parts per million by dry volume .....	24-hour.
5. Mass burn waterwall and refractory .....	100 parts per million by dry volume .....	4-hour.
6. Mixed fuel-fired, (pulverized coal/refuse-derived fuel) .....	150 parts per million by dry volume .....	4-hour.
7. Modular starved-air and excess air .....	50 parts per million by dry volume .....	4-hour.
8. Spreader stoker, mixed fuel-fired (coal/refuse-derived fuel) .....	200 parts per million by dry volume .....	24-hour daily.
9. Stoker, refuse-derived fuel .....	200 parts per million by dry volume .....	24-hour daily.

<sup>a</sup> All emission limits (except for opacity) are measured at 7 percent oxygen. Compliance is determined by continuous emission monitoring systems.

<sup>b</sup> Block averages, arithmetic mean. See § 60.1940 for definitions.

<sup>c</sup> 24-hour block average, geometric mean.

TABLE 6 OF SUBPART BBBB—MODEL RULE—REQUIREMENTS FOR VALIDATING CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following continuous emission monitoring systems	Use the following methods in appendix A of this part to validate pollutant concentration levels	Use the following methods in appendix A of this part to measure oxygen (or carbon dioxide)
1. Nitrogen Oxides (Class I units only) <sup>a</sup> .....	Method 7, 7A, 7B, 7C, 7D, or 7E .....	Method 3 or 3A.
2. Sulfur Dioxide .....	Method 6 or 6C .....	Method 3 or 3A.
3. Carbon Monoxide .....	Method 10, 10A, or 10B .....	Method 3 or 3A.

<sup>a</sup>Class I units mean small municipal waste combustion units subject to this subpart that are located at municipal waste combustion plants with an aggregate plant combustion capacity greater than 250 tons per day of municipal solid waste. See § 60.1940 for definitions.

TABLE 7 OF SUBPART BBBB—“MODEL RULE—REQUIREMENTS FOR CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

For the following pollutants	Use the following span values for CEMS	Use the following performance specifications in appendix B of this part for your CEMS	If needed to meet minimum data requirements, use the following alternate methods in appendix A of this part to collect data
1. Opacity .....	100 percent opacity .....	P.S. 1 .....	Method 9.
2. Nitrogen Oxides (Class I units only).	Control device outlet: 125 percent of the maximum expected hourly potential nitrogen oxides emissions of the municipal waste combustion unit.	P.S. 2 .....	Method 7E.
3. Sulfur Dioxide .....	Inlet to control device: 125 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit. Control device outlet: 50 percent of the maximum expected hourly potential sulfur dioxide emissions of the municipal waste combustion unit.	P.S. 2 .....	Method 6C.
4. Carbon Monoxide .....	125 percent of the maximum expected hourly potential carbon monoxide emissions of the municipal waste combustion unit.	P.S. 4A .....	Method 10 with alternative interference trap.
5. Oxygen or Carbon Dioxide.	25 percent oxygen or 25 percent carbon dioxide .....	P.S. 3 .....	Method 3A or 3B.

TABLE 8 OF SUBPART BBBB—MODEL RULE—REQUIREMENTS FOR STACK TESTS

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the following methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
1. Organics Dioxins/Furans .....	Method 1 .....	Method 23 <sup>a</sup> .....	The minimum sampling time must be 4 hours per test run while the municipal waste combustion unit is operating at full load.
2. Metals Cadmium .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Lead .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Mercury .....	Method 1 .....	Method 29 <sup>a</sup> .....	Compliance testing must be performed while the municipal waste combustion unit is operating at full load.
Opacity .....	Method 9 .....	Method 9 .....	Use Method 9 to determine compliance with opacity limits. 3-hour observation period (thirty 6-minute averages).
Particulate Matter .....	Method 1 .....	Method 5 or 29 .....	The minimum sample volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160 ±14 °C. The minimum sampling time is 1 hour.
3. Acid Gases <sup>b</sup> Hydrogen Chloride .....	Method 1 .....	Method 26 or 26A <sup>a</sup> .....	Test runs must be at least 1 hour long while the municipal waste combustion unit is operating at full load.
4. Other <sup>b</sup>			

TABLE 8 OF SUBPART BBBB—MODEL RULE—REQUIREMENTS FOR STACK TESTS—Continued

To measure the following pollutants	Use the following methods in appendix A of this part to determine the sampling location	Use the following methods in appendix A of this part to measure pollutant concentration	Also note the following additional information
Fugitive Ash .....	Not applicable .....	Method 22 (visible emissions).	The three 1-hour observation period must include periods when the facility transfers fugitive ash from the municipal waste combustion unit to the area where the fugitive ash is stored or loaded into containers or trucks.

<sup>a</sup> Must simultaneously measure oxygen (or carbon dioxide) using Method 3A or 3B in appendix A of this part.

<sup>b</sup> Use CEMS to test sulfur dioxide, nitrogen oxide, and carbon monoxide. Stack tests are not required except for quality assurance requirements in Appendix F of this part.

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